Between the political and politics: Infrastructure as hegemony in Israel and Palestine

Inauguraldissertation

zur Erlangung des Grades einer Doktorin der Philosophie am Fachbereich 03 Sozial- und Kulturwissenschaften,

der Justus-Liebig-Universität Gießen

vorgelegt als kumulative Dissertation

von

Amina Nolte

Vom Fachbereich 03 Sozial- und Kulturwissenschaften
an der Justus-Liebig-Universität Gießen
Eingereicht im November 2023.
Als Dissertation angenommen am 07.Juni 2024.

Tag der Disputation / mündlichen Prüfung: 07.Juni 2024
1. Gutachter: Prof. Dr. Andreas Langenohl
2. Gutachter: Prof. Dr. Sven Opitz

TABLE OF CONTENTS

Erklärung

Ich habe die vorgelegte Dissertation selbständig, ohne unerlaubte fremde Hilfe und nur mit den Hilfen angefertigt, die ich in der Dissertation angegeben habe. Alle Textstellen, die wörtlich oder sinngemäß aus veröffentlichten Schriften entnommen sind, und alle Angaben, die auf mündlichen Auskünften beruhen, sind als solche kenntlich gemacht. Bei den von mir durchgeführten und in der Dissertation erwähnten Untersuchungen habe ich die Grundsätze guter wissenschaftlicher Praxis, wie sie in der „Satzung der Justus-Liebig-Universität Gießen zur Sicherung guter wissenschaftlicher Praxis“ niedergelegt sind, eingehalten.

Amina Nolte
21.11.2023

Acknowledgements

Over many years in which this dissertation grew, it developed its very own infrastructure. I would thus like to thank my very own “people as infrastructure” who helped, guide, and sometimes carry me through this project in the last years.

Thank you to Andreas Langenohl who was the first of all to realize that my project was actually about infrastructures. Thank you for inspiration and help with all the different ideas and texts that emerged during the last years. And for being very understanding when things took longer than expected.

Thank you to Sven Opitz for agreeing to be my second supervisor, I could not think of a better fit and I am curious to see what you think of my suggestions about hegemony and ANT.

Thank you to Carola Westermeier whom I met during my time at GCSC and who supported me to become part of the SFB “Dynamics of Security.” I learned a lot from you and am very thankful for all your support throughout the years. I enjoyed our collaborations, be it joint workshop organization, paper writing, traveling and the shared interest in good things of life such as coffee, red wine and kids :-)

Thank you to Carolin Mezes whom I was lucky to meet during the first SFB celebration in 2018. The evening commenced a relationship of mutual trust, interest and support- along but also beyond the topic of infrastructure and security.

Carola and Carolin, what would I have done without you?

Thank you to the Sonderforschungsbereich “Transregio 138 Dynamiken der Sicherheit” for the support, exchange of ideas and fruitful workshops and conferences that I was able to attend.

Thank you to Philipp Lottholz and Raffael Beier for the joint work on our papers. Also to Oezgican Oezdemir whom I met at CEU in Budapest and where we started to develop the idea of publishing on infrastructure together. So it happened that we became the editors of one volume of “META” on infrastructure and I am thankful for all the work we accomplished together - despite all the hardship we faced.

Thank you to Gideon von Riet for your help with discussing and sharpening my work, especially during the last phase and the time that I spent at NWU in South Africa. I enjoyed our exchange of ideas and our Whatsapp chats on infrastructure failure in South Africa.

Thank you to the great team from the Social Anthropology and Sociology Department at CEU Budapest. I spent an inspiring and eye-opening time at CEU in 2016 and had great teachers who encouraged me to develop and sharpen my project further. Thank you to Daniel Monterescu, Dorit Geva and Alexandra Kowalski for your engaged teaching, mentoring and general interest in my PhD topic. CEU taught me a lot about teacher-student relations and I hope that my teaching can be inspired by yours one day.

Thank you to Haim Yacobi with whom I started this journey during my time as a student at the Hebrew University in Jerusalem. He encouraged my interest in the train, supervised my first paper on the train and suggested we write a joint paper together. Thank you to Nimrod Luz for your support throughout the years, for checking on me once in a while and for your help in reaching out to Daniel Monterescu at CEU. Thank you Marik Sthern for a nice and interesting collaboration during my fieldwork time in Jerusalem.

Thank you, Clara Wenz, for your friendship that extends from Damascus to Jerusalem, Berlin, London, Würzburg and beyond. I admire your curiosity and love for life, music and our shared interest in cities and the stories of people. To many more years to come with Adam, Selma and Ilija.

Thank you to my two academic partners in crime, Ansar Jasim and Schluwa Sama. I am glad that we found each other during our studies. But what keeps us together is much more than an interest in theory and critical thinking. Thank you for your friendship and solidarity along the way in the last years.

Thank you to Danielle Barkai, Philipp Kühltau and Monika Žulytė for the help on the way and on the finish line of the dissertation.

Thank you to my friends and colleagues from disruptiF- feministisch bilden und beraten e.V. with whom I share the urge for new approaches to political education and the need to pose questions, learn new methods and never stop trying new things while unlearning others.

Thank you to my family - the one I come from and the one I built in the last years. To my parents, who could not care less about this dissertation- but in the best way possible- because it doesn't define what I am to them. To my siblings Victor and Emilie with whom I share a sense of belonging and home wherever they are.

And to Johannes, my partner with whom I share a deep interest in the meaning and practice of “the political” and with whom the private is political and the political private. And to Adam and Selma, who make me laugh and cry and sleep less and love more every day.

And to Zorro, who keeps me good company during lonely hours of writing.

Overview of published articles included in this dissertation

Title	Journal/medium	Author/s	Year	Key words
Politics, infrastructure and representation: The case of Jerusalem's Light Rail	Cities (double blind peer review)	First author: Amina Nolte Second author: Haim Yacobi, Professor at UCL	2015	Infrastructure; politics; hegemony; space; urban; Jerusalem
Political infrastructure and the politics of infrastructure	City (double blind peer review)	Author: Amina Nolte	2016	Infrastructure; politics; political; urban; Jerusalem
Editorial: Infrastructuring Geographies: Histories and Presents in and of the Middle East and North Africa	META – Middle East, Topics & Arguments (peer review)	Authors: Amina Nolte with Ezgican Özdemir, CEU Budapest	2018	Infrastructure; Theory; Conceptual; Middle East
Between Public and Private: The Co-production of Infrastructural Security	Politikon (double blind peer review)	First author Amina Nolte Second author: Dr. Carola Westermeier, University of Amsterdam	2020	Infrastructure; Security; Critical Infrastructure
Global Aspirations and Local Dis-connections: A critical comparative perspective on tramway projects in Casablanca and Jerusalem	Political Geography (double blind peer review)	First author: Dr. Raffael Beier, Ruhr-University Bochum Second author: Amina Nolte	2020	Infrastructure; worlding; hegemony; state; representation; global; Jerusalem
Ordering Movement and Mobilizing Security: On the Production of 'Critical Infrastructure'	Chapter in "The Mobility-Security Nexus and the Making of Order: An Interdisciplinary and Historicizing Intervention", Planned for the Routledge Series *Critical Security Studies* (Peer Reviewed and Editors reviewed)	Author: Amina Nolte	2022	Infrastructure, Securitization, Critical Infrastructure, Hegemony
'Reclaiming security and infrastructures: The emergence and discontents of "Safe" and "Smart City"	Security Dialogue	Authors: Amina Nolte with Dr. Philipp Lottholz, University of Marburg	2026	Safe City; Smart City; infrastructures
Failing better together – a stylized conversation about fieldwork	E-International Relations (peer review) Online and Print publication	Authors: Amina Nolte with Johannes Gunesch, CEU Budapest	2020	Ethnography: Hegemony; Security; Fieldwork: Methodology

Additional publications

Title	Journal/medium	Author/s	Year	Key words
Infrastructures as the Social in Action: An Interview with Ronen Shamir	META- Middle East, Topics & Arguments (peer reviewed)	Second interviewer: Ezgican Özdemir, CEU Budapest	2018	Infrastructure; ANT; Theory; Middle East
Den Staat wieder spüren – Heimat und Infrastruktur	Theorieblog (Online)	Second author: Carola Westermeier	2018	Infrastructure; state; public: private; critical infrastructure
The Show Must Go On? – Kommende Katastrophen und die Regierung durch Resilienz (Rezension des Buches „Das Sicherheitsdispositiv der Resilienz“ von Andreas Folkers)	KULT Online	None	2019	Resilience; Security; Dispositive; critical infrastructure

Introduction: General conceptual approach for this cumulative dissertation

1. Infrastructural lives

The first lines of this introduction emerged during my stay in Johannesburg and at North West University in Potchefstroom, South Africa. It is here that I began to draw together an academic and analytical engagement with infrastructure that spans many years, numerous articles and chapters. This engagement is influenced by the visceral confrontation with constant infrastructural failure - an everyday experience that people in South Africa have known for decades.

Infrastructure in South Africa does not merely work invisibly in the background to enable everyday routines and life, as the name *infra* suggests. On the contrary: Infrastructure in South Africa was and is constantly failing. As a researcher of infrastructure, the confrontation with this failure in a context that was hitherto largely unbeknown to me was an important way "in" to my concluding engagement with infrastructure for this dissertation. Not only did it generate a critical reflection of my work and thoughts on infrastructure. It also sharpened an understanding of how research on infrastructure connects, combines and assembles many topics that are important to social theory, sociology and to me, as an (always in becoming) sociologist.

Seeing and understanding infrastructure in Johannesburg and South Africa, and also engaging with its histories, its imbricatedness into violence, domination and resistance, might seem far away from the context I have focused on most to study and research infrastructure: Jerusalem, Israel and Palestine. At second sight, however, it is not so different at all: Contemporary South Africa offers a compelling perspective into infrastructure through history, pertinent to the gathering, alignment and articulation of social and political struggles in, but also across different contexts, spaces and times.

Commuting by car to Potchefstroom, which is about 1,5 hours Southeast of Johannesburg, already immersed me into the "infrastructuring"[1] of everyday life. With the township of Soweto stretching itself outwards of the city and fading into numerous informal settlements that are built and constantly being (re)built along the highway, infrastructure is everything but *infra:* it is right there, sometimes fully built, sometimes crumbling, at times partially collapsing or lacking parts, sanitation, or connecting roads, at times failing altogether, which forces people to constantly work through, around and with this failure (Simone, 2021):

> "*Here, as in many poor townships and informal settlements in South Africa, residents come into contact with and are interpellated by the state not only as citizens, but also, and often primarily, as members of 'population,' entangled in administrative relations and procedures and the objects of governmental care or neglect*" (von Schnitzler, 2016:4).

Post-Apartheid South Africa experiences severe challenges when it comes to enabling the promised shift to democracy and liberty for all its citizens. Having long been deeply divided along racial lines, segregation ("apartheid" in Afrikans) might have ceased to exist in legal and political terms. However, its legacy is omnipresent when it comes to socio-economic segregation, deprivation of education, lack of access to health care and in general services that could also go under the German term of "Daseinsvorsorge" (Folkers, 2017).

Apartheid, as a system of inequality, separation and domination along racial lines, was a project that was realized, actualized and maintained through many different channels. However, it was also created, upheld, constantly reworked and actualized by and through infrastructure.

As a project of domination and subjugation, "apartheid was precisely about infrastructures" (von Schnitzler, 2015). "Apartheid":

> *"... similarly depended upon and was conjured into being by specific infrastructural modalities of power. This was particularly so in the urban areas, in which, following the ideology of grand apartheid, black residents were stripped of citizenship and designated 'temporary sojourners'*

> *whose permanent home and political representation were envisaged to ultimately be in the rural Bantustans. Infrastructures became both symbols and conduits of apartheid state power, but they also shaped habits and the senses. Such infrastructural modalities of power thus operated at a number of distinct registers that ranged from the symbolic, to the biopolitical and the sensory. Together, they produced a very specific political terrain, one whose remains shape the contemporary politics of infrastructure"* (von Schnitzler, 2016:12).

As such, apartheid as a political system might have come to an end in 1994. Subsequently, South Africa started transitioning into a liberal Democracy in which civic rights and participation in the public sphere are formally granted to each and every citizen. Yet, as much as apartheid was realized, maintained and symbolized by its infrastructures, their long built, oftentimes material, administrative and practical legacies still resonate and reverberate throughout the country. That is, apartheid's hegemony lasts into the present, as its material presence and the deep legal, social, political, and racial divisions it enforced persist along the lines of infrastructure to this day.

But the history of apartheid's infrastructure is not only one about oppression and subjugation. Infrastructures, in their simultaneity and sheer being, also provided the platforms, means and channels through which apartheid as a political system was finally dismantled. Much of the resistance against apartheid happened in, along and exactly through the channels of its infrastructural existence and consolidation. Infrastructures were used throughout the country in order to keep the apartheid system from running smoothly: Be it everyday, small acts of sabotage, boycotts or acts of defiance, or the big and famous cases of Nelson Mandela's underground group attacking "critical" infrastructure, apartheid's infrastructure was widely used by its opponents to dismantle the system of racial segregation.

The presence of infrastructure or even the "infrastructuredness" of apartheid as a political project makes a compelling case for an infrastructural perspective in the field of Social Theory or Sociology, a perspective that this dissertation seeks to sharpen: Infrastructures draw together events, agents and materials across different scales and temporal and spatial dimensions. They allow us to study their specific workings, effects and fixations - their hegemonies so to say - at a given moment in time. They provide us with a "political terrain" (von Schnitzler, 2016:11) through which we can study how things come together while still being able to relate them to their specific spatial and temporal situatedness. In particular, this dissertation contributes to an understanding of infrastructure as hegemony. It aims to unearth the inherent ambivalence of infrastructures that manifest lived realities and simultaneously provide avenues for their contestation. This pertains to an engagement with the "political" as well as "politics" in/through infrastructures and how they relate to questions of "security."

Infrastructure, as discussed here, is the spatial expression of a specific political moment (Nolte, 2022). Infrastructure materializes as hegemony. Therefore, in this dissertation, I not only trace how infrastructures sediment "out there" into the goabouts of everyday life and come to appear as "social facts". I also highlight that infrastructures actually always remain "a matter of concern" or even "a matter of struggle" (Folkers, 2018:145) as they gather, express and represent a specific political order. The eight articles of this cumulative dissertation all contribute to this account of infrastructure as hegemony, while each of them accentuates a different conceptual and/or empirical perspective. They all underline the conceptual understanding of infrastructure as hegemony as a relational expression of governance which materializes spatially and temporally. In turn, this helps to substantiate the concept of hegemony by engaging the formative difference between "the political" and "politics", which then again impacts on the account of infrastructure.

In order to develop my argument, this introduction will first broadly introduce the field of infrastructure studies by highlighting the main lines of debate (section 2). In particular, I review

formative assumptions and understandings vis-à-vis “politics” (section 2.1) and “the political” (section 2.2). In section 2.3, I then move to suggest an integrative approach towards infrastructure. This approach combines a conceptual understanding of infrastructure as hegemony with a methodological approach to infrastructural worlds. In thinking-together “the political” and “politics” rather than pitting them against each other as debates in post- and/or anti-foundational social theory tend to do, I suggest hegemony as a relational concept. To substantiate this claim and its conjunction with infrastructure, section 3 draws on the work of Antonio Gramsci, Ernesto Laclau and Chantal Mouffe, but also Henri Lefebvre on hegemony. This not only helps to refine the role of “the political” and “politics”, but also show how the concept of hegemony is inherently relational and can be read along its temporal and spatial dimension. Section 3.3 then draws those lines together. It argues for a combination of post-foundational and anti-foundational approaches to infrastructure that makes it possible to highlight infrastructure as inherently political *and* simultaneously as politics in the making.

Upon conceptualizing infrastructure as hegemony, I introduce security along its bearing on infrastructure (section 4). While I had not initially planned on focusing on security as a concept, I was quickly confronted with its pertinence “in the field” as I was researching infrastructure in Jerusalem. Through my engagement, I then gradually realized how closely security and hegemony are related - both empirically and conceptually. I therefore suggest studying security in relation and conceptually close to hegemony. To wit, struggles for security can also be read along the lines of “the political” and “politics.”

Against this conceptual backdrop and the frame it provides, the eight published contributions that are the constitutive parts of this dissertation are presented in section 5. I show how the articles all relate to the concepts of hegemony, “politics”, “the political”, as well as security, and identify what they contribute to the respective academic debates. As a way of engaging with my own process of thinking, reading and writing throughout my doctoral research on infrastructure and security, I also add critical reflections on the articles and the prospects for future work they yield. In the final section, I discuss the imprint of the terror-attacks Hamas committed on October 7, 2023, as well as the war on Gaza that followed, on the field of infrastructure studies from the perspective of a critical engagement with infrastructure and security studies.

2. Infrastructure Studies between “The Political” and “Politics”

Infrastructure studies have grown immensely popular during the time I conducted my research. Within a few years, many disciplines have turned to infrastructure as a conceptual and/or methodological lens. They seek to understand not only the systems and functions on and through which society operates but also the socio-technical means by which society is assembled, constituted and performed. Infrastructure as a topic of social inquiry has attracted the interest of social scientists for a while already. But their theoretical approaches to infrastructure stem from very different schools of thought. Some approaches link their analysis of infrastructure to state power (Marx, 1972; Barney, 2018; Man, 1984) and capitalist accumulation and infrastructure as “constant capital” (Marx, 1972; Barney, 2018; Harvey, 1989; Dalakoglu, 2017)[2]. Other, more anthropologically oriented approaches relate to infrastructures as “conceptual forms” (Lévi-Strauss, 1962, as cited in in Harvey and Knox, 2015:2), “classifications” (Bowker and Star, 2000: 106) “networks” (Castells, 2006; Collier, 2011), “scapes” (Appdurai, 2011) “actor-networks” (Latour, 2005; Castells, 2006) “assemblages” (Delanda, 2006; Farias and Bender, 2010; Ong and Collier, 2007) or situate infrastructure analysis within Foucault’s framework of the “dispositif” (Gordon, Colin and Foucault, 1980; see also Folkers, 2017).

While the specific focus varies between and across disciplines when it comes to the analysis of infrastructure, one key assumption most of the approaches share is about its inherent relational character. Infrastructures "are things and also the relation between things" (Larkin, 2013: 329). As such they can never be studied as material objects only but rather through and along the relations they create, enable and extend through time and space. Therefore, most of the approaches to infrastructure, crosscutting the disciplines of sociology, cultural anthropology, human geography and media studies "have come to understand their objects of concern as networked, socio-material forms that materialize and shape relations, provision, and connection" (Mezes, 2023: 18).

But as most of these approaches agree on the inherently relational character of infrastructure (Anand, Gupta and Appel, 2018; Harvey, Jensen and Morita, 2017), they do vary in their understanding of "politics" and "the political" applied to infrastructure. Importantly, however, infrastructure remains undertheorized when it is not explicitly related to terms and concepts such as the "political", "politics" and the "social." While some approaches assume infrastructure to be "political" projects a priori to the effects they create, others argue that it is infrastructures that come to shape, assemble and gather what we understand as "politics" and the "political" in the first place. While the former approaches assume that infrastructures materialize political relations and follow specific modes of "politics", the latter work with a radical openness towards infrastructure's effects and consider politics a process of constant socio-technical world making.

In the last years, many ethnographic accounts and case studies of infrastructure were published that associate infrastructure with something "social", "political" or "politics". Yet, the underlying assumptions regarding these terms, their traditions and implications are hardly ever worked out explicitly. Likewise, many accounts of infrastructure as either "politics" or the "political" seem to use the terms interchangeably[3]. But they, too, seldom explicate their understanding of "politics" and "the political". This, however, appears necessary to indicate the difference that exists between the terms and thereby contribute to a better understanding of infrastructure.

It is in that sense that I fully agree with Bruno Latour who lambasted the widespread tendency to explain very specific human-material configurations with attributes such as "social", "political" and as the outcome of "politics" (Latour, 2007: 3). I, too, am convinced that infrastructure can not just be labeled as something "socially relevant" or organizing "politics" without attending to the ideas and concepts that shape our idea of what "the social" or "politics" actually denotes. However, as I will exemplify throughout this introduction, I disagree with Latour (and others when it comes to an ontological understanding of infrastructure) in the assumption what "the political" and "the social" is and how it relates to infrastructure.

To further develop my own argument and formulate a critique but also suggestion vis-à-vis Latour, the following sections introduce the debates around infrastructure along the lines of their use and application of the terms "politics" (2.1) and "the political" (2.2). I situate them in theoretical approaches, namely anti-foundational (ANT) and post-foundational theory (Post-Marxism), discuss shared assumptions but also utter disagreements in their theoretical approaches towards analyzing the social. This overview of current debates regarding infrastructure then helps to exemplify and strengthen my argument with regards to my own conceptual approach to infrastructure as hegemony which follows in section 3 of this introduction.

2.1. Infrastructures as “Politics” in the making: Perspectives from ANT-inspired approaches

> *“The focus on infrastructures as dynamic relational forms has begun to offer interesting analytical possibilities, allowing ethnographers to address the instabilities of the contemporary world, to highlight movement, contingency, process, and conflict in and through the study of particular infrastructural formations” (Harvey and Knox, 2015: 4).*

Approaches that do not assume that infrastructures are political projects per se, but rather bring about “politics” or “the political” in the process of their ever-emerging relations and as a form of world-making are inspired by the so-called wide field of Science and Technology Studies (STS) and Actor-network-Theory (ANT) specifically. ANT rose to prominence when Bruno Latour rejected a naturally given binary between nature and society (2005) and suggested instead a continuum of networks, actors and actants with a specific focus on the agency of non-humans (Hope and Lemke, 2023: 11). Closely related to ANT is an “ontological reorientation” (Coole and Frost, 2010: 6f) towards the world in which scientific “truths” are probed and a new relation between politics and the material world is put forward. Many studies of infrastructure can be associated with theories and methodologies around this understanding of infrastructure as “ontology” (Bowker, 2015), attending to everyday engagements with material formations and to the agency of objects, materials and things (Latour, 2005; Latour, 1990; Jensen and Morita, 2015). Through this turn, “materials themselves are being recognized as specific, relational, agential and, importantly, political” (Knox, 2017: 3). In this understanding, infrastructures are not understood as projects that are moved or underpinned by political and/or social ideologies or motivations. The “political” here is an effect of the agentive powers of sociomaterial relations, not an a priori force that shapes the way relations materialize or not. In this sense, priority is given to the agentive powers of infrastructural materials in the very constitution of what we come to understand as “social” and “political” life (see also Nolte and Özdemir, 2018 :6). Seen from this conceptual lens, infrastructures are “technological arrangements that impinge on socio-technical relations and their political repercussions” (Nolte and Özdemir, 2018:7). They become sites through which the “social”, “political” and “politics” emerge in an “open-ended and unpredictable ‘dance of agency’” (Jensen, 2015: 19).

Drawing mainly from the wide field of Science and Technology Studies (STS) and ANT, a particular focus on infrastructure has emerged in the subfield of “Techno-Politics”. In it, “scholars increasingly view infrastructures as sociotechnical assemblages through which it is possible to tease out the arrangements of people and things and ideas and materials that make up larger technological systems” (Harvey and Knox, 2015: 5). Their relational character and ability to exceed their own necessity as “material politics” (Harvey and Knox, 2015: 5) make them not objects of, but rather “constitutive of political power” (ibid). As such, infrastructures do not materialize a specific moment of the political, they create the very “possibilities for what it means to be a person, what it means to be a democracy” (Bowker, 2015) and hence they shape the understanding of what becomes “politics” or the “political”. These approaches work with an understanding of infrastructures that emphasizes their radical contingency as they assemble many actors, humans and non-human alike, whose workings and doings are not determined by any structure and hence radically open to any possible future.

2.2. Infrastructures as a priori political projects

> “*(I)nfrastructure remains irreducibly political, because it distributes and concentrates resources and advantage, enables and disables mobility (including migration), organizes spatial and temporal relations, and manifests inequality and power. Under conditions variously named globalization, neoliberalism, and the network society, infrastructure is the medium by which capital*

> *becomes the state, and by which the state accomplishes itself as an organizer of flows and bases of identity"* (Barney, 2018).

The assumption that infrastructures are "irreducibly political" stems from a field that I would broadly subsume with a (Post)Marxist tradition. In it, categories such as state, economy, class and power are upheld and subjected to critical analysis. From this perspective, infrastructures are understood as "social relationships materialized" (Barney, 2018). As such, this approach shares the understanding of infrastructures as inherently relational with other approaches ("infrastructures as ontologies"). However, it is assumed that these relations are never free of power. Rather, infrastructures are held to manifest and materialize this power through time and space:

> *"Similarly, relationships of exploitation and disparity between the Euro-American metropole and the Global South were and are materialized in infrastructures of slavery, colonial extraction, production, circulation, and the imposition of sovereign violence. Slavery, imperialism, and colonialism (including settler colonialism) operate by transforming racialized peoples and their geographies into infrastructure. Infrastructures are thus social relations in material form, and so are a primary site for materialist analysis" (*Barney, 2018*).*

This understanding of infrastructures as "political" comes from a tradition of critical materialist analysis. In it, the notion of difference plays a constitutive part. Difference "assumes the role of an indicator or symptom of society's absent ground" (Marchart, 2007: 5). Difference is constitutive of the struggle of antagonistic forces which seek to establish their particular truths as universal (e.g. hegemonic). These approaches understand infrastructure to be powerful tools in materializing the interests of those who were able to establish their partial interests as universal truth. Conceptually they assume infrastructures to work towards establishing a "common sense" (Chu, 2014: 353) by interpellating subjects with ideologies of difference (such as race, class, gender, see for example Cowen, 2017) and to (infrastructurally) organize them into positions of marginality (Kathiravelu, 2021: 51). As such, infrastructures provide the "political terrain" (von Schnitzler, 2016) through which powerful forms of domination, exploitation, excavation and extractivism play out (Dunlap, 2023; Barley, 2018; Anand, Apel and Gupta, 2018; Cowen, 2017; Cowen, 2020). Seen from this analytical tradition, infrastructures entail the political moment of their grounding. They enclose and carry on a political moment through a politics of infrastructure in which difference, as a mode of distinction and subjugation, is (infra)*structurally* fixated in time and space. This fixation in time and space is crucial to understand how approaches to infrastructure relate to the "political" with regards to the past and future: They suggest a temporal orientation because infrastructures carry past hegemonies ("the political *geist* of a given moment" as Anand suggests in "The Infrastructure Toolbox", 2015; see also Cowen, 2017) and entail promises for the future. They tell us "what people think their society should be like, what they might wish it to be, and what kind of statement the government wants to make about this vision" (Gupta, 2015). The spatial perspective extends this idea of infrastructure as a spatial fixation. Space, understood as "a product of human action and thus a process (...) is always produced" (Dalakoglou, 2017: 12 drawing on Lefebvre's ideas on space). It is determined by those who are able to fix it in time and space and therefore transport a specific message or form of representation around it. As such, infrastructures are the means by which "a state proffers these representations to its citizens and asks them to take those representations as social facts" (Larkin, 2013: 336)." The understanding of the imaginary and representational function of infrastructure (projects) is crucial here. State power never works by means of domination and subjectivation only, but also by organizing its subjects into modes of connectivity and collectivity (see also Opitz and Tellmann, 2016). In this manner, a common imaginary is created, while the state and its infrastructure turn into some form of imaginary themselves (Dalakoglou, 2017). This "infrastructural imagination" (Langenohl, 2020) becomes

"part and parcel of modernisation projects and rhetoric" which are always already imbricated in forms of exploitation, extractivism and violence.

2.3. Towards an integrative approach: Infrastructure bridging "politics" and "the political"

Both approaches that address infrastructures as "politics" in the making and approaches that see infrastructures as a priori political projects provide important insights - but also have their limitations. This is why I propose an integrative approach that bridges "politics" and "the political" with regard to infrastructures.

Approaches that see infrastructures as a priori political projects share the assumption that "the political" is inherent and built into infrastructural projects. The political institution and grounding of infrastructure encloses and carries on moments of "difference". It turns them into socio-technical machinery that constantly works towards "differentialization" (along the lines of class, race, gender, abledness etc.). Within this approach, infrastructures are not just "out there" and "assembling the social". They are deeply interwoven with past ideologies, spatially fixated hegemonies and struggles for future victories.

However, and this is a crucial aspect of these approaches to infrastructure as well, they do not work with determinist, fully fatalist ideas on how infrastructures materialize and fixate domination. As Dalakoglou suggests in his ethnography on a cross-border infrastructure in the Balkans:

> *"(t)he road product is open to social manipulations: it 'kills' the authority (state, suprastate, the developer, etc.) in the same way that the Barthian poststructuralist perception of the text 'killed' the author. The meanings of the road as a product are open to those who use it, experience its existence, are simply aware of its existence, or even just expect it or its rhythmic flows"* (Dalakoglou, 2017:13).

This said, the study of infrastructure from a "political" location is never fully done by stating the political character of any infrastructure. Rather, as I suggest, the important work is to scrutinize and probe the political moment(s) of the institution of any infrastructure(s) while attaining to the fact that infrastructural forms, once partially founded, are always exceeded by their own multiplicity. Socio-technical relations develop their own dynamics and their encounter brings about new formations, opening up infrastructure as "a key domain through which practices are regulated and normalised as well as an arena for negotiation, resistance and potential for difference" (Graham and McFarlane, 2015: 2). Thus, while the understanding of "the political" as an ontological dimension is crucial (as I will elaborate later with Laclau and Mouffe's post-foundational theory), a concern with an understanding of "politics" as the routinized, sedimented and everyday enactment of the political is warranted.

It is against this background that I now turn to unfold my own conceptual approach towards infrastructure: I bind together the concepts of "the political" and "politics" within a post-foundational application of Laclau and Mouffe's understanding of hegemony. That is, I show how infrastructure relates to both dimensions through the relation between "the political" in its ontological dimension and "politics" as its ontic enactment. This conceptual approach provides a frame for all articles in this cumulative dissertation and marks one of its main contributions. The approach is further developed in section 3, in which I conceptualize infrastructure as hegemony in its temporal and spatial dimension. I then suggest an integration of post-foundational approaches towards infrastructure as "political" with anti-foundational approaches towards infrastructure as "politics". This helps to address infrastructure as sites where politics are assembled, forged and extended while sticking to the post-foundational claim that "the political" precedes "the social" and "politics".

As such, I need to also acknowledge the fact that, as a researcher, my own writing and conceptual work on infrastructure is influenced by my own (political) position in the world, by the concepts I embrace and engage with. Coming from a critical theory and feminist perspective on social sciences, these views are woven into this text and my approach towards infrastructure. Here, I follow von Schnitzler's instructing comment on infrastructures as "an epistemological point of departure" (von Schnitzler, 2015) where she suggests that

> *"while studies of infrastructure are often concerned with tracing specific sociotechnical assemblages, the ethnographic object thus constituted at the same time gestures toward something beyond itself. In other words, the assemblages we de-scribe are always mediated and oriented by particular concepts and prompted by intellectual endeavors that extend beyond themselves. Such orientations, in turn, emerge from specific formations; they are not a priori conceptual problems, but develop out of historically constituted intellectual and political conjunctures" (von Schnitzler, 2015).*

Thus, a social science approach to infrastructure can not start with an engagement with infrastructure as a scientific subject alone: As infrastructure draws together so many different concepts, expectations and struggles, one needs to be very clear on one's own theoretical and conceptual assumptions regarding the world and how to study it. This "epistemological point of departure" (von Schnitzler, 2015) is helpful to clearly identify one's own positionality and the chances, challenges and limits that it entails while researching infrastructure. In my case, my positionality as a white, female researcher from the "Global North", researching in the context of Israel and Palestine, has its specific challenges and pitfalls which I also discuss more in depth in section 5.

3. Infrastructure as hegemony

In this section I introduce the concept of hegemony. I do so by first drawing on the origins of the idea of hegemony by Antonio Gramsci. and then move to present the post-foundational approach of Ernesto Laclau and Chantal Mouffe (3.1). This is an important step in order to conceptualize infrastructure as applying to "the political" and "politics" at the same time. I then show how hegemony has a temporal and spatial dimension with the help of Henri Lefebvre's ideas on space (3.2). This is helpful to conceptualize infrastructures in all their relational complexity as well as conceptual and empirical richness but also with regards to their inherent materiality.

Conceptualizing infrastructure as hegemony has been the main endeavor and conceptual contribution of my publications so far. From the first article published in 2015 for the Journal *Cities* (together with Haim Yacobi) to the last paper that has recently been accepted (with revisions) for *Security Dialogue* (together with Philipp Lottholz), hegemony and infrastructure - or infrastructure as hegemony - remains one of the guiding theoretical concepts that appear throughout my work.

3.1. What is hegemony? A post-foundational approach to infrastructure

> *"Any advance in the understanding of present-day social struggles depends on inverting the relations of priority which the last century and a half's social thought had established between the social and the political. This tendency had been characterized, in general terms, by what we may term the systematic absorption of the political by the social. (...) Nowadays, we have started to move in the opposite direction: towards a growing understanding of the eminently political character of any social identity"* (Laclau, 1990:160).

Hegemony, as it was developed by Antonio Gramsci, is often misunderstood as a form of domination or oppression. But what makes hegemony a suitable concept for an overarching

approach to infrastructure is its inherently relational character.[4] This allows for an understanding of infrastructural formations as dynamic socio-material entanglements that are not only shaped by what Gramsci has called "common sense". As I will explain with contributions from post-foundational theory, infrastructural formations simultaneously also form this common sense.

Gramsci has developed the concept of hegemony as a form of governing through consent (Broecker and Westermeier, 2019: 91). His idea of hegemony remains very much linked to class struggles in which a certain class "does not *take State power*" but *"becomes* State" (Laclau and Mouffe, 2014: 59). Nonetheless, the Gramscian idea of hegemony remains highly relevant to a conceptual approach to infrastructure for two reasons: First, it is his conception of the material character of ideology (Laclau and Mouffe, 2014: 57) which helps to situate the socio-material character of infrastructure in the field of hegemony. This is a point that I will develop in turn by also drawing on Henri Lefevre's work on space and hegemony. The second important contribution is how Gramsci's concept of hegemony builds on a radical openness towards the formation of the social as "the constitutive ground or 'negative essence' of the existing, and the diverse 'social orders' as precarious and ultimately failed attempts to domesticate the field of differences." (Laclau and Mouffe, 2014: 82). As such, there exists no "social order" as an underlying principle: "Society and social agents lack any essence, and their regularities merely consist of the relative and precarious forms of fixation which accompany the establishment of a certain order" (Laclau and Mouffe, 2014: 84). This reconstruction of Gramscian reflections on hegemony through the words of Ernesto Laclau and Chantal Mouffe is happening here on purpose, as it unfolds a line of thinking on hegemony that they have continued with their ideas on Hegemony and Radical Democracy. Much of their work draws on the difference between "politics" and "the political" (or the social and the political) that I also engage in more detail. Moreover, much can be gained from their rejection of the social as an underlying "social order" or as society as an existing structure or totality, in particular for a productive junction of concepts of hegemony and of STS/ANT.

Small detour around anti-foundational ANT

As Laclau and Mouffe emphasize in their work on hegemony, in post-foundational theory no fixed ground of society is assumed. Society does not serve as the "*ground* of social processes, in this sense, (and it) does not constitute a *founding totality*" (Marchart, 2007: 136). Similar to that claim, Latour has postulated that there is no "social dimension" or "social context" or "such a thing as society" (Latour, 2005: 4-5). He refuses to explain things through anything referring to "social structure" or "social framework." As such, he also puts in question the role of sociology as a "sociology of the social" (Latour, 2005: 9) which he wants to see replaced by a "sociology of associations" (ibid.). It is beyond the scope and focus of this dissertation to summarize what Latour develops in many of his works and on which an entire field of STS/ANT studies draws. But what is important about his understanding of a "sociology of associations" is that he suggests that a focus on relations and associations is helpful to account for the countless human and non-human actors that act together in the process of "in "reassembling the social" (Latour, 2005). Two aspects are particularly interesting here with regards to my own argument:

First, Latour is not interested in a process of deconstruction. Instead of wanting to deconstruct political narratives or social projects, Latour is interested in building new ones. He suggests "that it's much more important to check what are the new institutions, procedures, and concepts (that are) able to collect and to reconnect the social" (Latour, 2005: 11). For him, to be critical towards the world does not mean to deconstruct it. Instead, he suggests that critique should be "associated with more, not with less, with multiplication, not subtraction" (Latour, 2004: 248).

Without being able to fully address the issue of critique and its role in social sciences and critical security studies, I consider post-foundational theory insightful. As a theoretical approach, it allows for the building and forging of new relations and projects instead of merely deconstructing them. As such, the call for a “radical democratic politics” (Laclau and Mouffe, 2014) offers perspectives into how coalitions can be forged and new (political) identities created (Laclau and Mouffe, 2014: 164). In that sense, Latour, Laclau and Mouffe all search for the creation of new (political) projects in times of tremendous societal challenges.

Second, Latour is an interesting companion or even addition to post-foundational theory as he attends to the materiality of the world and the “social fabric.” Latour, opposed to Marxist accounts of materiality in which the materials dominate and determine the social sphere, is interested in the role of the material as an important aspect and co-actor in creating, shaping and thickening “the social.” However, it is not materiality itself that interests Latour (or many others working with ANT). The question of what comes to matter in human and non-human interaction and what becomes a “matter of concern” in these processes is more important (Latour, 2004). Latour refers to things as “gatherings" (2004: 233) which assemble the work and interaction of so many actors in order to become a “thing.” As such, the material is never just the “material” out there but always drawn into a net(work) of actors, interactions and new becomings. Latour and ANT-inspired researchers therefore propose ANT as a methodology of following, thickening, describing and sticking (Fioravanti and Velho, 2010: 3) to “just follow the actors themselves in order to learn with them how they establish new associations” (ibid.).

In this sense, many researchers address infrastructure within the conceptual language of ANT because it helps to account for the socio-material processes that infrastructure assembles. But in doing so, they confront a fundamental shortcoming: They endlessly trace connections and interactions, but can not account for processes of stabilization, domination or even violence. I argue that this is because they lack the concept of conflict - or antagonism - that shapes infrastructures as they come into being in the first place. Instead of endless new moments of becoming and boundless connectivities, a post-foundational concept of hegemony rests on the idea of a successful and partial fixation. This is where I conceptually locate infrastructure. For this, ANT is a helpful tool to analyze and study hegemony as a gathering. Or put differently: ANT possibly becomes one (methodological) approach to hegemony as both approaches share the same relational and constructivist assumptions. However, they do not share the same philosophical grounds when it comes to the differences between the “ontic” and the “ontological” status of politics vis a vis the political, which I consider a crucial contribution from the theoretical perspective of Laclau and Mouffe.[5]

3.2. Thinking infrastructure as hegemony with Laclau and Mouffe

Laclau and Mouffe have developed “hegemony as a theory of the decision taken in an undecidable terrain”[6] (Laclau and Mouffe, 2014: xi). For them, the political assumes primacy over the social as much as “(T)he social is constituted by sedimented hegemonic practices, that is, practices that conceal the originary acts of their contingent political institution (...) Social order is therefore hegemonic in nature and its origin is political” (Marchart, 2007: 139)[7]. Drawing on the idea that there is a “conceptual difference between politics and the political” (ibid.:5), a split between the ontic and the ontological dimension of society is postulated (see Marchart, 2007: 5). Likewise, the social is constituted and fixated through contingent decisions that Laclau has called “the political” (Laclau, 1999: 146). As such, the social is the outcome of political practices that have sedimented into an order which then appears as given, self-evident or neutral. However, its founding moments are always political, as the “social does not rest on a fixed ground but rather on a series of fixations of meaning” (Marchart, 2007: 139). This is why Laclau and

Mouffe conceive of the political "not as a superstructure but as having the status of an *ontology of the social*" (Laclau and Mouffe, 2014: xiv).

But how to make sense of this understanding of "the political" within the context of hegemony and infrastructure? To address this question, I will first draw on Laclau and Mouffe's relational understanding of hegemony in order to then explain how I see this to contribute to a conceptualization of infrastructure.

As the social is no underlying structure that determines action as a totalizing unit such as "society" (Laclau and Mouffe, 2014: 97), Laclau and Mouffe understand the social as a temporal fixation of articulations: "*The practice of articulation, therefore, consists in the construction of nodal points which partially fix meaning; and the partial character of this fixation proceeds from the openness of the social."* (Laclau and Mouffe, 2014: 100). As a (temporary) fixation of meaning, no hegemony is ever finished. Rather, "the articulatory practices have managed to construct a structural system of differences, of relational identities" (ibid.: 104). In this system, "(h)egemony is, quite simply, a political *type of relation, a form,* if one so wishes, of politics; but not a determinable location within a topography of the social" (Laclau and Mouffe, 2014: 125).

This understanding of hegemony is inherently relational. As such, hegemony never manages to establish itself as some sort of permanent dominance or system of rule. Instead, hegemony has to be organized into articulations through the organization of antagonistic[8] interests. It also needs to be fixated and stabilized through what Laclau and Mouffe call "nodal points". Through these nodal points, meaning establishes itself as hegemony and thereby unfolds temporally and spatially. Infrastructure, from this perspective, can thus be understood as hegemony (or one expression of hegemony): It is a socio-material relation that gets partially fixated in time and space but also continues to work on the ontic dimension of politics. The next section will expand on this.

3.3. Infrastructure and the spatialialization of the temporal moment

As much as Laclau and Mouffe assume the primacy of the political over the social, as the social is an "objectivity" made of sedimented practices which go back to a moment of political foundation, their work also draws immensely on the difference between "the political" and "politics." Drawing this difference is also important for a conceptualization of infrastructure because it accentuates a temporal and spatial dimension. In turn, to understand why it is productive to think of infrastructure as hegemony, we need to conceptually unpack those dimensions.

For Laclau and Mouffe,

> "the political" assumes a "fundamental or radical dimension (...), *which grounds and regrounds the social from without, or, rather, from an ultimately impossible outside. Thus what is named by the term 'the political' is the moment of the institution/destitution of the social or society respectively"* (Marchart, 2007: 135).

"The political" relates to the dimension of antagonism in which differences are organized, articulated and get fixed *momentarily.* This temporal dimension of the political is crucial as this momentary fixation of antagonistic articulations then unfolds into "politics."[9] "Politics", for Laclau and Mouffe, is the "ensemble of practices, discourses and institutions which seek to establish a certain order and organize human coexistence in conditions that are always potentially conflictual because they are affected by the dimension of the 'political'" (Mouffe, as cited in Marchart, 2007: 143). Once established, these practices, institutions and discourses unfold the temporal fixation of this articulation *spatially.* They are the socio-material sedimentation of

a hegemony which presents itself as a given objectivity but rests on a political founding moment.

However, it is crucial to understand that "the political" and "politics" (as much as the political and the social) are tied to each other. They are

> *"... two sides of the same coin. They represent two different modes of the political: the social mode of the political is not non-political or apolitical, but rather is characterized by the oblivion or forgetfulness of its instituting moment, which is the moment of the political. For this reason, Laclau speaks about 'the primacy of the political over the social.*" (Marchart, 2007: 148).

Hence, infrastructure is the temporal and spatial sedimentation of hegemony. It rests on a political grounding moment while it unfolds as politics through routinization and its mundane and ordinary workings.

As such, and going back to the relevance of hegemony to the concept of infrastructure, "the social" rests on the fixation of contingent articulatory practices in which some articulations become hegemonic (which in turn frames the ensuing contestation). If a hegemonic articulation succeeds to be fixed temporally, it appears as "the 'naturalized' *social sphere"* (Marchart, 2007: 139) which Laclau conceptualizes as sedimentations of power. According to Marchart's reading of Laclau, these sedimentations of power become "*space"* as "they spatialize the temporal moment of pure dislocation into a choreography" (Marchart, 2007: 139).[10]

As I have argued in "Ordering Movement and Mobilizing Security- On the Production of 'Critical Infrastructure'" (2023), I see Infrastructures as "exactly this spatialization of the temporal moment." Against the background of a spatial conceptualization of hegemony (which I develop further with Lefebvre in the following section), the temporal fixation of an articulation sediments into some "form" or "structure". This is highly relevant to a concept of infrastructure: Routinized and sedimented, this fixation becomes "infrastructure" or "infrastructural".

As much as Laclau and Mouffe are helpful for a conceptualization of infrastructure as hegemony, what is needed is to bring the spatial and material aspects of infrastructure with regards to hegemony to the fore. While Laclau and Mouffe affirm the *"material* character of every discursive structure" (2014:94) their focus lies on the embeddedness of every object (and hence everything material) into the discursive conditions of their emergence (Laclau and Mouffe 2014:93). As such, they reject the material/non-material binary because for them, nothing is pre-discursive.

To substantiate my argument for infrastructure as hegemony and its inherently spatial and material dimension, I now go on to draw on Henri Lefebvre's work on space, hegemony and infrastructure. I do so by pointing to the ways in which his work, read together with Laclau and Mouffe's discourse theory[11], helps to develop an understanding of infrastructure which is substantiated throughout the papers presented in this cumulative dissertation.

3.4. Infrastructure as spatialized hegemony

> *"The concept of hegemony was introduced by Gramsci in order to describe the future role of the working class in the building of a new society, but it is also useful for analysing the action of the bourgeoisie, especially in relation to space. (...) Hegemony implies more than an influence, more even than the permanent use of repressive violence. It is exercised over society as a whole, culture and knowledge included, and generally via human mediation: policies, political leaders, parties, as also a good many intellectuals and experts. It is exercised, therefore, over both institutions and ideas"* (Lefebvre, 1992: 10).

Henri Lefebvre was one of the first Marxist thinkers who developed a spatial perspective on hegemony. His work on space, hegemony and infrastructure also marks the very beginning of

my engagement with infrastructure, as his work features prominently in the first peer reviewed articles in *Cities* (2015) and *City* (2016).

Mostly known for his extensive work on cities and especially for coining the expression "right to the city,"[12] Lefebvre's theorization of space is relevant for a conceptualization of infrastructure from the perspective of hegemony. He was instrumental in further developing and "spatializing" the Gramscian notion of hegemony. He emphasized the "the active - operational or instrumental - role of space, as knowledge and action, in the existing mode of production." (Lefebvre, 1992: 11). For Lefebvre, infrastructure was crucial for an understanding of the capitalist mode of production (see also Lefebvre, 1992: 280). For this, he draws on the idea of momentary fixation. While Laclau and Mouffe take a different route, they share the relational understanding of hegemony with Lefebvre:

> "*In the context of the expansion of capitalism, there is a need to reconsider the concept of fixed (or constant) capital, for this concept can no longer be confined in its connotations to the equipment, premises and raw materials of a given enterprise. According to Marx, fixed capital is the measure of social wealth. Quite obviously, this category must cover investment in space, such as highways or airports, as well as all sorts of infrastructural elements"* (Lefebvre, 1992: 345).

The idea of infrastructure as "fixed capital" that Lefebvre develops further from Marx unfolds into his spatial and material perspective on (state) hegemony. Space, as he contends, is actively involved in the production and reproduction of society and its institutions; it does not represent or channel power, but shapes and transforms it. He goes on to show "*how space serves, and how hegemony makes use of it, in the establishment, on the basis of an underlying logic and with the help of knowledge and technical expertise, of a 'system*'" (Lefebvre, 1992: 11). In line with Gramsci as well as Laclau and Mouffe's notion of every hegemony being grounded in a "political" moment, Lefebvre argued that "the political" is deeply embedded in everyday experiences and spatial practices. In his book "The Critique of Everyday Life", he explored how the routines, interactions and spaces of everyday life and politics are imbued with political significance and reproduced in what he calls "system". He demonstrates that this "system" is the sedimentation of a political moment and its routinization into spatial politics. However, and this is crucial in order to understand Lefebvre as a thinker who is very open to ontological perspectives on the world, the everyday-space, including infrastructure, never closes itself, but always entails its contradictions. In line with what I have discussed above, this spatial fixation can only be partial - notwithstanding its claims for totality. Consequently, Lefebvre criticizes lines of thought that suggest the state or capitalism could determine society's faith completely. He argues that "*[t]hey make society into the 'object' of a systematization which must be 'closed' to be complete; they thus bestow a cohesiveness it utterly lacks upon a totality which is in fact decidedly open*" (Lefebvre, 1992: 11). Therefore, Lefebvre is a great thinker and ally in the project of thinking infrastructure as "political space and of (the) politics of space" (Lefebvre, 1992: 281)[13].[14] His work allows for an attentiveness towards the everyday (Lefebvre 1992: 95; 116; 366) as a scene of routinization and sedimentation through which the political oscillates.

Space, for Lefebvre, materializes, shapes and transforms social relations. This pertains to the struggle of classes for hegemony, the rule with and through violence, but also the struggle of people to re-appropriate the means of production with the intention to re/gain ownership of their lives. As such, space extends and fixates specific times- or the social relations of a given time- spatially and materially (Lefebvre, 1992: 93). In that sense, Henri Lefebvre is also a helpful companion to think through materiality and how it relates to space. For Lefebvre, the material is part of the everyday and the lived sphere. For him, everyday life and lived space reflects hegemonic attempts for fixation and domination. At the same time, he insists on the unruliness of material things as they can assume different meanings in contexts of appropriation and emancipation. As such, the material is a crucial aspect for Henri Lefebvre's relational approach

towards hegemony and space. This is helpful to think of an integrative approach towards hegemony - from Lefebvre to Latour.

3.5. Between the Political and Politics: Thinking hegemony from Lefebvre to Latour

Lefebvre's work is crucial to the way I conceptualize infrastructure. His spatial and material perspective on the difference between the "political" and "politics" informs my perspective of infrastructure as politically grounded. Infrastructures come into being in specific political moments in which partial truths become hegemonic and other claims and struggles for truth are marginalized. As their moment of grounding becomes less and less traceable, infrastructures sediment into social structure and politics. Yet, their presence or absence therefore harks back to a moment of political grounding, as their workings and not-workings are negotiated in the realm of politics and its very own/peculiar institutions, machines and technologies. As such, infrastructures assemble politics. They draw together humans and machines, materials and resources, bodies and codes.

In this line of thought, infrastructures – once they come into being as the spatial and temporal fixation of a partial truth – ontically make up the sphere of "politics". Therefore, I suggest that infrastructures are the most appropriate sites to scrutinize the in-betweenness of "the political" and "politics": as politically grounded and simultaneously integral to unfolding politics.

Post-foundational approaches such as Laclau and Mouffe's approach to hegemony but also ANT-based approaches reject the idea of a stable grounding of the social.[15] They focus on the relational and contingent moments of the political and the social. They also share an anti-essentialist understanding of the social while equally denouncing the existence of a closed totality such as "society"[16] (Latour, 2005; Laclau, 1990). However, they differ with regards to their perspective on foundations. Gramsci, Lefebvre as well as Laclau and Mouffe are post-foundational. They refuse the claim of a pre-existing totality that stabilizes and shapes social relations. But they also recognize that partial truths get established through antagonistic struggles that can become hegemonic and fixate a specific political moment temporally and spatially. Against that, works in ANT reject this idea of the partial grounding. They are anti-foundational in the sense that they do not share the idea of a partially fixed ground that becomes hegemonic in antagonistic struggles. Rather, they assume the never-ending and ever-ongoing association of relations in which no negativity exists or predates social relations. This intellectual tradition has contributed exciting insights into post-human worlds, the anthropocene and has led to an increased turn towards the material in its co-production of the world(s) as constantly in the making. As such, they are important theoretical and conceptual tools for the study of infrastructure. However, the conceptual work with ANT/STS never proved to be fully satisfying for my own work on infrastructure. I was not interested in merely describing and thickening infrastructural relations but rather in exploring and explaining their conflictual character. I consider this crucial, as their effects on the ground - and combined with effects of securitization - prove very power- and harmful to humans and non-humans alike. It is thus crucial to both my analytical argument as well as any progressive political project that such infrastructural relations can only be changed if they can be traced back to a moment of political grounding.[17]

My work started from the epistemological location of differentiating between the ontological and the ontic, between the political and politics. This understanding helped me to understand infrastructure as political endeavors while at the same time being able to attend to the way they make up, shape and disrupt politics. This allows for a grounding of infrastructure studies in political thought inspired by (Post)Marxist thinking and Critical Theory while at the same time being able to methodologically trace, follow and assemble the many ways of infrastructures in

their own world-making. As such, we can understand them as political projects, but study them in the process of making and assembling politics.

4. Infrastructure, hegemony and securitization

The idea that infrastructures materialize and sediment the moment of their political grounding is crucial. It helps trace how - and why - security and securitization found their way into my research. My dissertation project started as an ethnographically oriented project in Jerusalem. The idea was to study the planning, construction and contestation around the Jerusalem Light Rail project. From the beginning I had adopted the conceptual framework of Lefebvre for my research, seeking to approach infrastructures spatially by "following" the relations on and through which the train project was established. In my contribution to e-Relations in 2020 together with Johannes Gunesch I described this process of "spacework" (Gunesch and Nolte 2020), referring to Tsing (2015) in terms of the "spatial continuities, frictions, and struggles I learned about" (Gunesch and Nolte, 2020).

Security was not a concept that I initially planned on working with. Rather, it emerged from fieldwork itself, as I was tracing and following the stories, actors and technologies around the train. Security, as I learned, was a big part of the train's genealogy. Security concerns were not just circulating around the train, they were built into the train by means of technological and material artifacts. This includes bullet proof windows and gas detectors but also by the ways the train was planned and how it finally materialized. Security became a topic as most of the things around the train were framed around the notion of security: how the building of the train could be secured against potential threats, how the material structure of the train could be protected, how people on the train could be protected, against whom, but also around the notion of security itself, pertinent to debates about what security and whose security were actually considered.

In this way, I came to realize that while "infrastructure space is doing something, it is not just doing anything. Infrastructures, as they order movement into circulation and mobility, wanted and non-wanted movement, hence produce differentiated objects, are political projects" (Nolte, 2023: 53). Once security concerns circulate around and through infrastructure, the question of its criticality is at stake. As I argue in line with Buzan/Waever and de Wilde in all my contributions, this pertains to a process of politicalization as "issues of security are neither an exogenous fiat nor are they objectively given, but they emerge from political constructions" (Nolte, 2023: 54). Thus, through my findings during fieldwork, security became a topic for my research – and critical security studies became the field in which I found the conceptual frameworks and debates that helped me to navigate my own research.

A "critical" approach to security is driven by the understanding that security is more than the absence of threat. As such, the field of critical security studies has seen a "broadening" and "deepening" of approaches to the security agenda. So-called "schools" such as "Copenhagen", "Paris", "Aberystwyth" or "Beirut" have dealt with different conceptual approaches and foci towards the study of security. They all share the assumption of security as a "derivative concept" in which the way we think about security or decide to study it is very much linked to our broader concept of the world and how we choose to explain it (Peoples and Vaughan Williams, 2015:4). Importantly, the "Copenhagen"-school coined the term "securitization". This describes the discursive process in which powerful actors define a given issue as a security threat vis-à-vis a certain audience that then accepts the measures deemed necessary to provide security (Waever, 1995: 54). While the Copenhagen-school was widely criticized for its focus on discourse at the expense of practical implications and the violence this entails (see for example Balzacq et al., 2010), the term "securitization" remains a powerful concept to refer to processes

in which security becomes a topic within the field of politics. Moreover, the Copenhagen school was criticized for its understanding of politics which mostly addressed security politics in a liberal western setting, assuming a distinction between “panic politics” and “normal politics” that is difficult to uphold outside of the “West” (Browning and Mc Donald, 2013: 248).

While numerous debates within critical security studies have been held in the last few years, my focus is on the question of securitization and the role of “politics” and the “political.” In line with Laclau and Mouffe, I have argued that politics is the ontic enactment of the moment of ontological political grounding. Accordingly, in my reading, many debates in the field of critical security studies address the field of “politics" of security. In that sense, my work adds to the debates by addressing the question of the “political” in more detail and with empirical examples.

My Routledge chapter “Ordering Movement and Mobilizing Security: on the Production of Critical Infrastructure” (2022) is demonstrative: It provides an in-depth analytical explanation of how the turn from infrastructure to critical infrastructure as an attempted securitization must be read as a form of (re)politicalization. In the article, I draw on hegemony theory from Laclau and Mouffe again and the above outlined conceptual framework. I argue that the attempt for securitization

> “*reactivates the political momentum of infrastructure and the struggle of its moment of institution as it actualizes, stabilizes or contents its seemingly objective technological workings. While ‘a successful hegemony signifies a period of relative stabilization and the creation of a widely shared common sense’, the attempt of securitization reactivates the political origins of infrastructure and lays open their contingency and openness to reformulation and redefinition”* (Nolte, 2023: 54).

In 2020, Simone Tulumello argued that approaches inspired by Laclau and Mouffe’s political theory for radical, agonistic democracy “have been surprisingly marginal to critical security studies" (2020: 2). This proved helpful in further developing my own conceptual contribution in which security is inherently part of the “political”: In his intriguing contribution to Security Dialogue, Tulumello conceptualized “security through the lenses of the ‘political’ - that is, the inevitable dimension of conflict that emerges through and in social relations"; he also discussed “security’s relations with politics as a struggle for politicalization” (Tulumello, 2020: 2). Drawing on Neocleou’s critique of security as a political technology of liberalism, Tulumello argued that the critique of securitization should not imply the rejection of security because “a certain degree of freedom from threats - is necessary for the flourishing of individuals and for the empowerment of oppressed groups” (2020: 6). As such, Tulumello convincingly argues for an understanding of how “antagonistic security embraces security’s participation in the political - that is, its quintessentially conflictual nature and imbrication with (unequal) relations of power” (Tulumello, 2020: 7). Security, as I understand it with reference to hegemony and together with Tulumello, is neither a liberal technology, nor apart from “normal politics” or just emancipatory. Security is inherently antagonistic and hence builds on the understanding of the difference between the political and politics. That is, the question of what becomes an issue of security (and hence securitization) is part of the antagonistic struggle for hegemony itself. Once hegemonic, specific “security topics” become common sense as they routinize into daily practice, regulations and laws, and thereby make up a field of politics in their own right. But they also remain essentially contestable as these politics do not rest on a fixed ground but only on a partial foundation that can always be re-negotiated for it belongs to the sphere of the political.

As such, “critical infrastructures”, as I conceptualize them, are inherently political projects. On the one hand, this is because they entail the successful hegemony of an infrastructure, fixated in time and space, along the successful “securitizing move” of rendering it “critical” due to its role in the reproduction of society and social order (Aradau, 2010; Folkers, 2017). On the other

hand, this “securitizing move”, and the hegemony it temporarily and spatially manifests, are always open for contestation.

5. Contributions and critical comment

All contributions in this cumulative dissertation draw on an understanding of infrastructure and security as relational and political. As they all fit into the above outlined framework of the “political” seeking to establish itself through and as hegemony, each of the articles has a specific conceptual perspective. Most of the articles share an empirical focus on the urban setting of Jerusalem (Israel/Occupied Palestinian Territories) or Israel (Nolte, 2015; Nolte, 2016; Nolte and Westermeier, 2020; Nolte, 2022) as this was the place from which the idea for this dissertation evolved and was developed. Others, especially the comparative articles that are co-authored with colleagues expand the empirical focus to other countries and contexts. They make a case for the need to study infrastructures and the processes of their (assumed) criticality comparatively (Gunesch and Nolte, 2020; Beier and Nolte, 2020; Nolte and Lottholz, *forthcoming*).

The first article “Politics, infrastructure and representation: The case of Jerusalem’s Light Rail” was developed during the time of my Masters degree in Jerusalem as a close collaboration with my professor and mentor Chaim Yacobi.[18] As a contribution to “Cities”, a double peer-reviewed Journal in the field of urban studies, this article offers an in-depth case study of the implementation phase of the Jerusalem Light Rail (JLR). At its core, the article analyzes infrastructure, in that case the JLR, as a form of spatial hegemony. It looks at how this works not only through its material presence but also by means of its (spatial) representation. Drawing on Lefebvre and other critical urbanists, the article - without already making the outlined difference between the political and politics explicit - uses Lefebvre’s theory on space to situate infrastructure within the realm of the political. It does so by addressing the representation of the train and the practices, institutions and discourses that emerged around it in the realm of politics. The article also highlights the conflictual nature of infrastructural projects and hence its grounding in a political moment. It traces how the hegemony of the Israeli security-dispositif is manifested through/around the JLR. As such, the article documents how such projects, once hegemonic, seek to establish themselves as common sense by means of routinization. By way of promoting distinct stories and narratives, but also pictures, the JLR “infrastructure takes on a crucial role in enforcing a hegemonic Jewish-Israeli narrative over Jerusalem as a ‘united city’, or more accurately a ‘Metropolis’” (Nolte and Yacobi, 2015:35). The article initiated a long-term engagement with the JLR and beyond, seeking to not analyze an “objective urban reality, but rather the analysis of how the perception of a certain urban reality is produced” (Nolte and Yacobi, 2015:35) within the context of (spatial) hegemony.

The second article “Political infrastructure and Politics of Infrastructure", published in a special issue of “City. Analysis of Urban Change” in 2016 builds on this analysis. It tackles the “politics of infrastructure” and “the political” with regards to the JLR. The article, also a contribution to urban studies, looks at the “politics of place-making” at play in the ways the JLR has been planned and implemented but also how the naming of its stations has come about. Its main contribution lies in the analysis of the “political” moment of infrastructure. The paper follows the general outlook on infrastructure as hegemony and hegemony as an inherently relational project. It scrutinizes infrastructure as the site where the “political” moment breaks through from time to time as its hegemony is openly questioned by those who use but also contest it. The “political”, as put forward in the article, denotes the space of struggle and contention in which the antagonistic moment of infrastructure becomes visible again. As such, the paper “recognizes the Israeli hegemony imposed on the city, but leaves space for the imminent possibility that the nature of engagement between these forces may change” (Nolte, 2016: 444).

The article thereby deliberately casts light at the very people who are often rendered invisible in the process of infrastructure-making. Without diminishing or even excusing the violence, the violent acts that Palestinians committed against the JLR infrastructure in the years of 2015 and 2016 are described as a "political act of becoming visible" (Nolte, 2016:450. While I realize in retrospect that I could have engaged this crucial issue more comprehensively, the article tackles the violence that is inherent in every infrastructure that has become hegemonic. It conceives of these outbreaks of violence as a spontaneous "collective antagonism" to the hegemonic order (Nolte, 2016: 451). "(T)he act of attacking the JLR can thus be seen as a moment 'when the natural order of domination is interrupted by the institution of a part of those who have no part'" (Ranciere qt. in Nolte, 2016:451).

The two articles, kicking off my year long engagement with infrastructure, immersed me in the body of work that already existed on infrastructure back then. Compared to today, this body was quite small as the field of infrastructure studies only started to grow. Against this backdrop, the two papers offered a relational analysis of infrastructure and centered on the concept of hegemony right from the beginning. But they did not really engage with infrastructure conceptually. As such, I still had to carry out an in-depth conceptualization of what infrastructure is, how infrastructure can be situated in the field of urban studies and how this again relates to the notion of the "political" and "politics, let alone hegemony. Also, while security is mentioned with regards to the JLR, it is not fully developed and made explicit as a crucial perspective on infrastructure. Looking at the articles today, in light of the rich debates and case studies of the past years, they would have emerged totally different (see section 6 for an idea of what I could have approached differently). However, they were my "epistemological point of departure" as they set the tone and conceptual lens through which all my following work on infrastructure and security evolved.

In a way, the editorial "Infrastructuring Geographies: Histories and Presents in and of the Middle East and North Africa" is a conceptual answer to the gap that I identified with regards to the two first papers. Co-authored with Ezgican Özdemir from Central European University, the editorial not only identifies "politics" and "the political" as the two paradigmatic perspectives from which infrastructure studies have approached infrastructure. I)t also suggests that these two perspectives can - indeed: should - be reconciled because they both understand infrastructure as "a crucial driver of the social" (Nolte and Özdemir, 2018: page).[19] The editorial proposes to study the two perspectives as "two different locations upon which infrastructure as a social science subject can be inquired" (Nolte and Ozedemir, ibid.). Drawing on the contributions in the special issue which Ezgican and I were editing, we zoomed in on five concepts which we saw re-emerging through all the contributions on infrastructure, namely in/visibility, affect, imagination, verticality and de/territorialization. In that these concepts crosscut the ostensive divide between "political" and "politics" they provide important impulses for infrastructure studies. Some of the concepts also point to a gap of infrastructure studies which is also reflected in my own engagement with infrastructure: The role of affect, bodies and sensorial arrangements is something that I had repeatedly come across in my ethnographic material, but never had the chance to engage further. This, I consider a shortcoming of my research (see also conclusion for outlook). Instead, I decided to engage more deeply with another issue/question: securitization. This followed directly from the editorial we authored: "Other areas of engagement with infrastructure that are currently being further developed and do not appear (in this editorial), delve into the relation between infrastructures and questions of their securitization, scrutinizing how certain vital systems emerge as critical infrastructure that warrant specific measures of protection" (Nolte and Özdemir, 2018:18).

This helped me to make sense of new fieldwork material that I collected in late 2018 and 2019 in Jerusalem and Israel. As such, security became more central to my research. In 2020, the article "Between Public and Private: The Co-Production of Infrastructural Security" that I co-

authored with Dr. Carola Westermeier[20] was published in the peer-reviewed special issue "Security Infrastructures" of "Politikon- South African Journal of Political Studies." It came into being during a research visit to a security conference in Jerusalem in November 2018 in which the JLR featured prominently as a flagship project of urban mobility and security. At the conference that we attended as researchers, Carola and I were able to conduct interviews with security practitioners from public and private institutions in Israel who provided us with insights into their perspectives on security and infrastructures. To make sense of their responses, we explicitly introduce a concept from STS into our understanding of infrastructures and the experts surrounding it. We use the concept of "co-production" from Sheila Jasanoff in order to account for the "ways in which they (*the experts*) mutually produced each other in their positionality within the public and private sphere. Within their interactions, they also coproduce the very socio-technical security problems that they suggested just wanting to solve" (Nolte und Westermeier, 2020:11). The article hence marks the passage from my engagement with infrastructure to the question of its criticality. Following the basic assumption of critical security studies "that security is not an objective reality but rather 'what actors make of it'"(Buzan and Waever, 2003:48) we found infrastructure a fitting platform and medium on and through which we could understand "the expertise and experts that produce security concerns as equally 'produced' through these interactions" (Nolte and Westermeier, 2020:2). The article, in line with my conceptual approach to infrastructure in the other papers, understands infrastructures not just in their material heterogeneity but also in the "modernist imagination" that is implied in the assumption of their functionality and hence precedes claims for their securitization (Langenohl, 2020). In this conceptualization, infrastructures remain deeply political projects to which securitization processes contribute even further. They are not critical in and of themselves, but rendered critical in a process of securitization. This process of securitization of specific infrastructures as "critical" not only produces critical infrastructure but also its own experts whose roles and expertise is co-productive. Here, "our findings suggests (sic!) that research into securitisation needs to take seriously the effects that stem from this division (*between public and private)* in the first place, not in order to disregard it altogether, but to understand the political implications that are engendered by these seemingly unpolitical sites of securitisation" (Nolte and Westermeier, 2020:16). As such, the article is a good example of how approaches that assume infrastructure and security as political projects can be combined with approaches that are interested in STS/ANT in an effort to account for the entanglement of expertise, materialities and technologies in processes of securitization. However, looking at the article today, some conceptual decisions and foci would have evolved differently. For example, the focus on co-production could have been more productive if it would have included the focus on a specific material device which would have helped us to sharpen our argument around the notion of socio-material co-production. Also, as the article was presented and discussed at different conferences, we realized how we could have taken our argument further and sharpened it with regards to the notion of co-production. However, the article sparked interesting academic debates (for example with Anna Leander during a workshop) and is also cited very thoroughly in Security Dialogue in autumn 2023 as Markussen draws prominently on this paper for developing his own argument on Covid 19 contact apps and the public/private co-production of security.[21]

The next published article was a cooperation with Dr. Raffael Beier[22] on "Global aspirations and local (dis-)connections: A critical comparative perspective on tramway projects in Casablanca and Jerusalem" for the peer-reviewed journal "Political geography." The article continues the direction of the first two articles. But it is the first one to situate infrastructure properly within the debates on (urban) infrastructure. It also extends my empirical focus through a comparison of tramway projects in Jerusalem, Israel/occupied Palestinian territories and Casablanca, Morocco. In looking at infrastructures as political projects, the article scrutinizes their

role in what we call “worlding”-strategies of national(ist) regimes. They use large scale infrastructure development projects, oftentimes financed by global investments, as “both a means and an end to urban ‘world-class” (Beier and Nolte 2020:3). While looking at the ways how these worlding strategies “materialise into a hegemonial (sic!) version of the globally aspired ‘world-class city’, branded as ‘global’, ‘modern’ and ‘sustainable’” (ibid), we also inquired the effects and politics that these projects generate for the local population “on the ground”. Drawing on interviews and ethnographic material that we both collected in our respective “field” we concluded that, in Casablanca and Jerusalem, the tramway projects “symbolise a form of political dominance and further hegemonise visions of the nation state- woven with a discourse on urban integration” while they have “enhanced previously existing processes of urban exclusion” (Beier and Nolte, 2020:10).

The chapter “Ordering Movement and Mobilizing Security: On the Production of ‘Critical Infrastructure’” was published in a peer-reviewed edited volume “The Mobility - Security Nexus and the Making of Order: An interdisciplinary and Historicizing Intervention” (edited by Werner Distler and Heidi Hein-Kircher) for Routledge in 2023. It is the conceptual heart of this dissertation as it develops, unfolds and wraps up the theoretical underpinnings of my approach to infrastructure and security. Building further on the insight that infrastructures are not critical in themselves but rather in relation to something they ought to provide, the chapter reconstructs “Critical Infrastructure” as outcomes of processes of securitization. It shows how infrastructures are constitutive of the political organization of movement: into *circulation* as potentially wanted movement and *mobility* as the potentially unruly and dangerous form of movement. Showing how this differentialization is crucial for an understanding of which infrastructures emerge as critical and how, the chapter combines infrastructure and securitization through the concept of hegemony. Building on the concept of hegemony by Gramsci, Mouffe and Laclau, infrastructures are introduced as political projects that manifest hegemony. As such, infrastructures sediment into some sort of structure that organizes movement into circulation and mobility, thereby actively contributing to the political logic that they materialize. The second part of the chapter draws on the debates in mobility and critical security studies on how circulation and mobility are conceptually separate. In the third part, “critical infrastructure” is discussed as a two-pronged attempt of securitization and stabilization of the very political logic that is built into an infrastructure. But the possibility for its contestation remains inherent nonetheless. To substantiate the conceptual remarks empirically, the chapter then draws on interviews that I conducted with Israeli security practitioners in 2019. I illustrate “the conceptual argument by highlighting how security works through movement and is increasingly ‘on the move’ itself as critical infrastructure has turned into a commodity on a market that revolves increasingly around security” (Nolte, 2023:46). The chapter ambitiously discusses many concepts that are central to questions of infrastructure, security and mobility. Presenting it in different academic contexts, I realized that it would have profited from a few amendments which I could not include in the final version anymore, but draw on here: The strict separation between the more conceptual first part of the chapter and the more empirical second part of the chapter are not helpful. Rather it would have been good to address the aspect of a global political economy as a powerful driver in the process of securitization of infrastructures in the first part of the paper already. As the chapter argues that any infrastructure can potentially evolve as “critical”, the commodification aspect which is driven by a political economy trying to securitize as many fields of life as possible as potentially “dangerous”, should have been more present in the first part of the chapter - also in order to make the first part less abstract. Moreover, and this is an important aspect which we discussed in a workshop that took place in Marburg in October 2021, the chapter does not consider how economically driven securitization logics also actively interferes and changes perspectives on the functionality of infrastructure and brings in new ones. Certainly, the chapter would have benefited from a more nuanced and dynamic perspective on this critical

moment of the (dis)stabilization of hegemony by also opening the prospect for new hegemonies to be forged in new articulations of interests and actors.

The next and conceptually last contribution to this dissertation is a contribution to Security Dialogue that is "accepted with revisions". The article, which I co-authored with Dr. Philipp Lottholz, is entitled "Reclaiming security and infrastructures: The emergence and discontents of 'Safe' and 'Smart City'".[23] The article is a comparative and critical analysis of so-called "Safe" and "Smart City" projects in cities in Central Asia (Bishkek and Almaty) and the Middle East (Jerusalem). It contrasts the ambitions and rationales of interest-driven urban security initiatives with the destabilizing and violent infrastructural realities "on the ground" in the respective local contexts. For this purpose, the article introduces the term of "infrastructured insecurity" as a new perspective to look at how infrastructures are not just securitized but also heavily marginalized, neglected and also instrumentalized in contexts of urban conflict and thus drivers or urban insecurity and exclusion. The article challenges the idea of "smart" and "safe" city initiatives and suggests that they play a big part in rendering communities rather unsafe. Hegemonic visions of security, conveyed in rather "fuzzy and diffuse 'Smart' and 'Safe City' projects in Israel/Occupied East Jerusalem and places across Central Asia produce highly selective and exclusive experiences of safety and smartness" (Nolte und Lottholz, 2026). We conclude that "in these urban settings, safety is not for all; rather, the safety of some segments of the population is pursued against those on the urban margins who are targeted by practices of 'infrastructured insecurity'" (Nolte und Lottholz, 2026).

The last text does not appear in its chronological order of publication but is a rather explorative piece on the challenges and pitfalls of fieldwork in specific research settings. The contribution "Failing better together" was published in 2020 together with Johannes Gunesch as a result of an EISA Early Career Researchers Workshop that took place in Prague in 2018. During this workshop, young scholars presented their respective research contexts and the challenges they faced during their fieldwork. Many of the discussions revolved around the notion of failure and the specific pressures and vulnerabilities that young researchers are confronted with when they engage in fieldwork, an oftentimes very lonesome and troubled experience. Framed as a conversation around fieldwork (as we were encouraged to try and explore new formats of writing and collaborating in this edited volume by Katharina Kusic and Jacob Záhora), the chapter contributes to the general methodological considerations that underlie my research. It also reflects struggles with my positionality as a young, white and female researcher in the field of Israeli security politics. It argues for "taking seriously ethnographic practice, political context, and the situatedness of experience and knowledge" (Gunesch and Nolte, 2020:56) and to "accept the partiality and limitedness of one's own perspective" (Gunesch and Nolte, 2020:57). Throughout my research and during the several "field visits" to Jerusalem and Israel, I adopted a methodological style of "following" the very dynamic field which I was researching. Leading me from one actor to the other, I followed people, signs, documents, rail tracks, as well as leads and hints from other people. Always collecting, writing, following and revisiting my experiences, I was privileged enough to travel back and forth to Israel/Occupied Palestine with my German passport, being able to engage into conversations with both Israelis and Palestinians alike as most of the people I approached were eager to share their perspectives and insights with me. However, not only was I following people: In the sensitive political setting that I moved in, I suddenly came to realize how people also started to follow me. It became obvious that people had gathered information before agreeing to meet me, "how the actors I tried to follow were all of the sudden following me. Googling me. Reading articles I had published" (Gunesch and Nolte, 2020:58). These observations affected my research as "it made me think about how affected my 'results' would be from all the presumptions and considerations that the people I interviewed had already gathered about me" (ibid.). I also reflected on my behavior during the interviews, as I started to hide and display specific information with regards to my research.

And I “remember ignoring the masculinity displayed while talking about security trainings, drone operations, surveillance and targeted killings along infrastructure in Jerusalem” (ibid.) while sitting and drinking coffee was part of the hegemony which I was seeking to research. These reflections during and after my fieldwork deepened my “initial flirt with Gramsci, Laclau and Mouffe” as I “understood the value of hegemony as a concept only against the backdrop of my ethnographic engagement. I learned that ‘hegemony is never complete’ but is always at work through the ‘contradictions between the official narratives of the dominant and the actual experience of the subaltern” (Gunesch and Nolte, 2020: 58). This deep engagement with hegemony is reflected in all my work. As I have argued throughout this introduction, it allows me to study infrastructures as comprehensively as their bearing on the political as well as politics, in all their dynamics, extensions and relations into the past, present and future.

6. Concluding discussion and outlook

"I have ordered a complete siege on the Gaza Strip. There will be no electricity, no food, no fuel, everything is closed. We are fighting human animals and we are acting accordingly." [24]

I am writing this introduction in dark days. On October 7th, militants of Hamas managed to cut through the military fence that separates the Gaza strip from Israel. They massacred Israeli civilians while also abducting many of them back into the Gaza strip to hold them as hostages. The Israeli army and military have reacted with the complete closure of the Gaza strip, not allowing any electricity, food or fuel into the area while bombarding Gaza, home to over 2 million people.

It's hard to write into unfolding events that are yet so close to the topic of this dissertation. Infrastructures play a main role in what is happening at the moment - either because they failed, because they lack or because they are withdrawn as a strategy of warfare. Infrastructures *matter* as they are embedded in the hegemonies that persist but also get fought over for new ones to emerge. Hamas terrorists broke through the fence that separates Israel from the Gaza strip. This fence, a “high-tech security barrier … bristling with razor wire, cameras and sensors, and fortified with a concrete base against tunnels and remote-controlled machine guns”, was considered hitherto deemed “impenetrable” (Times of Israel). Israel’s so-called “Iron Dome” infrastructure also failed to withstand the insurge of over 1000 Hamas members. Remote controlled drones and fire sniper from Hamas were able to bomb and disable communication towers, surveillance centers and security cameras while Hamas fighters could enter Israeli territory in big numbers. One reason why all this could happen was that the main Israeli-imposed security infrastructure failed. Its failure can be traced back to a series of events and interactions in which humans but also artifacts, data, algorithms and objects such as barbed wire played a big role. To reconstruct this collapse, ANT helps to account for the numerous ways in which humans and non-humans won and lost against the security fence. However, my approach to infrastructure as hegemony also underlines that the fence infrastructure fixated and materialized a political moment and constellation of power in the history of Israel and Palestine which was gradually reinforced in processes of ever increasing securitization. This hegemony might get reinforced as Israel wages war on Gaza to “eradicate Hamas”. But this hegemony might also be problematized in the time to come as the civilian and humanitarian costs of yet another violent escalation clearly undermine any notion of security. To follow how this contestation plays out, careful analysis needs to take into account the ways in which the infrastructure that is integral to the conflict came into being, assumed legitimation while presenting security for some, but also fortified the world’s biggest “open-air prison” for others (Human Rights Watch).

As bombs are falling on Gaza while I write these lines and people in Israel still bury family members and friends and/or try to collect information on the whereabouts of their loved ones, a perspective on the situation through the lens of infrastructure does not save lives. However, and I remain deeply hopeful for this, infrastructures can take part in building a better future. As the Jerusalem Light Rail could one day possibly connect a Jewish Israeli Jerusalem with an Arab Palestinian Jerusalem as two politically independent and yet economically and socially connected cities, infrastructures have the capacity to connect and to foster collectives and collaboration through, along and on them. At the moment, Israelis - many of them being part of the democracy movement that took place in Israel in the last year - use their apps, tools and technologies which they developed to strategize and organize in the wake of Israel's fading democracy. They do so in order to support communities in the south, organize aid and collect a tremendous amount of supplies and financial donations. As such they are what Abdoumaliq Simone has called "people as infrastructure", testifying to "the capacity of bodies to be simultaneously more and less than what they are – a dynamic infrastructure, (...) where the interactions among bodies and materials engenders new constellations of sense and capacity" (Simone, 2021: 1343).

Critical outlook

Even though I promote non-binary thinking and try to bring post-foundational and non-foundational approaches together, my own work so far does not reflect this integrative approach as much as I would like. My publications could have evolved differently had I engaged more seriously the idea of hegemony "as gatherings that draw together humans and non-humans, things and not-yet-things and materials and processes." For example, I have been carrying with me for a while the idea of following the manifold and complex ways of a "Rav Kav". This is a "smart" card that is used as the main form of payment on the Light Rail train and busses in Israel. While witnessing the inception of the Light Rail in Jerusalem, I noticed the struggles of introducing this card into a city in which its inhabitants don't share the same rights to the city. This is why much of the complex story of the Light Rail could have emerged by focusing on this little card: A story of invisible borders (Palestinians can use this card only on Israeli busses and trains while the Palestinian Bus systems, which operates in East Jerusalem, uses a cash system), transgression (there are many ways to avoid payment and Palestinians actively use them in order to not pay money for the train rides) and securitization (cards are personalized and people's movement can be tracked easily throughout the city). Looking at this, I sometimes regret not having told some of the "stories" in the published papers differently. But I hope to get this chance in future engagements.

In line with the thoughts developed in this introduction, I also think that a more conceptual approach to infrastructure is needed - as much of the work in infrastructure studies remains very case-study and thus empirically oriented. By no means is this a negative thing. But I still think that the field of infrastructure studies can gain from an in-depth debate on conceptualizations of infrastructure and the theoretical and methodological implications this entails. My own work on infrastructure as hegemony and possible ways of combining post-foundational and anti-foundational thinking can provide a starting-point for this undertaking. I would be happy for my suggestions to be elaborated on. Here, I have in mind Thomas Lemke and Katharina Hoppe, for example. In their new book, they suggest that approaches with a focus on human activities (such as Post-Marxist and other sociological accounts of the "social" and "society" in general) and post-human approaches (such as STS and ANT) should be thought together rather than pitted against each other in never ending debates on the role of the human in the world. With this, I agree. We live in a time in which infrastructures - and the ways and workings of their securitization - are heavily interwoven with asymmetrical power structures, the excavation of ressources, the exploitation of marginalized communities and with deeply rooted structural violence. Thus, the role of the human as the driver of wars, climate change and

exploitation should not be underestimated. At the same time we need to be more attentive to the agency, responses and sufferings of the world beyond humans. For these approaches that refuse the binary of human and post-human and that think along the lines of humans *and* non-humans, an infrastructural approach that combines post-foundational thinking of hegemony with anti-foundational approaches to "thinking with "following" and thickening descriptions appear particularly helpful.

Towards this end, more approaches that refuse the above mentioned binary should be brought forward in (Political) Sociology. One future contribution could therefore be to take up my thoughts and reflections from the introduction in a more conceptual paper. This could be developed into a journal article in order to discuss with a community of fellow (political) sociologists and people from other fields who are involved in the study of infrastructure. Another topic that emerged during my ethnographic fieldwork and a workshop at the SFB that I co-organized with Veronika Zink, Carolin Mezes and Bernadette Hof in June 2021 was the affective dimension of infrastructure and security. Infrastructures, as socio-material gatherings, work through and along affect. They reverberate promises for improvement, development and a safer, more people–friendly future in the making (Knox 2017). The existence of infrastructures, but also their failures as well as absence provoke individual feelings as much as collective affects. When looked at from the perspective of securitization, such affects are not just "out there". Rather, they are heavily mobilized in contexts that draw on "situational awareness" (Krasmann and Hentschel, 2019) to channel notions of fear and threat. Infrastructures are also built with an awareness toward affects. They produce an affective atmosphere (Anderson 2009) through which people move and become affected. But people also affect one another through the shared use of infrastructure. This is reflected in the Jerusalem Light Rail infrastructure. It was built not only to provide mobility, but has built in to its material structurethe possibility that the train might get attacked by those who oppose it as an infrastructure of occupation. Windows were bullet-proof, gas sensors integrated into each wagon and luggage storage carefully devised to leave no space for items with explosives. As such, the "security situation", as Israelis call it (Ochs, 2011), is visible and invisible at the same time. This, of course, depends on who you ask and who gets to answer. As affective arrangements, infrastructures like the JLR purport racialized ideas of fear and suspicion as well as the histories of embodied experience and trauma that are inscribed into their very presence. In many interviews, people recalled traumatic experiences of insecurity, fear and sometimes severe violence. They told me how they learned to "read" the atmosphere on the train, sensing if there was anything "in the air", as one of my interlocutors told me.

On the Jerusalem Light Rail, the feelings of insecurity are mutually shared between Jewish Israelis and Palestinians as the affective atmosphere is one of mistrust, anticipation and fear. Jewish Israelis have a very troubled relationship with public infrastructures as the Israeli public was targeted by bombings by Palestinians during the second intifada. This remains part of the collective memory and get activated in times of violence, Palestinians are exposed to heavy securitization along and on the train. Security guards patrol the trains, take people out for controls and can turn a very mundane situation into a war zone within seconds. Heavily armed, those guards are trained to also kill suspected attackers on the spot, something called "zero tolerance strategy" by former mayor of Jerusalem, Nir Barkat. On the other hand, the smooth functioning of the train is also used to produce collective senses of security. As the Israeli National News quoted Nir Barkat after violence flared up again in Jerusalem: "The city will continue to function, the train will continue to run, and even more so the police will continue to keep Jerusalem safe".

Much more could be said on the relation between infrastructure, securitization and affect. And it should. As I have gathered lots of materials and quotes on affect-related topics during my

research, I would like to develop a paper which relates infrastructure, security and affect. Drawing on Raymond William's "structure of feeling" and Sara Ahmed's work on affect and emotions, linking "infrastructure" to "structures of feeling" and individual feelings to power structures, societal dynamics and identities seems particularly relevant to me. A study of how infrastructures work through and on affective registers, how they shape collectivities, and how they produce affective atmospheres of fear and danger would be an interesting and much needed addition to the debate in infrastructure and critical security studies.

Lastly, I think that the notion of security - from all concepts I draw on here - can still be worked on. This is something Philipp Lottholz and I also suggested in our paper for Security Dialogue and that I currently develop into a paper together with Andreas Langenohl and Gideon von Riet. Security, as I discussed it with many people during my time in Israel and Palestine, is much more than the absence of threat. If security, in the sense of Latour, could be "more" and "not less", it would be studied as the presence of care and not the absence of risk. To think of infrastructures of care along the lines of (communal) security building could provide us with a more detailed and nuanced account of concepts of security – how people live, understand and build it.

Endnotes

[1] I purposely use the word “infrastructuring” as “not only a methodological shift toward the analysis of infrastructure in the making” (Niewöhner, 2015:9). Infrastructure, as I argue throughout this dissertation “is also an epistemological shift toward infrastructuring as articulation work entangling actors, technologies, and moral orders in specific ways” (ibid.).

[2] One example of a Marxist consideration of infrastructure as “state space” that goes beyond the state as the only object of infrastructure analysis or subject to infrastructural power is Henri Lefebvre’s work which I consider to be crucial for my own conceptualization of infrastructure as inherently political and yet contingent and dynamic.

[3] Example: “Although there is no shared consensus on the meaning of infrastructural politics – and indeed, such political claims are rarely in direct dialogue with each other – critical studies of infrastructure make a strong case for the high stakes of ‘the basic, the boring, the mundane, and all the mischievous work that takes place behind the scenes” (Hallinan and Gilmore, 2021: 620).

[4] This relational character of hegemony will later on also allow to add “security” or “securitization” to the picture as security relates to infrastructure in many ways and can help to enforce and stabilize infrastructure’s inherently political foundation.

[5] For a very convincing critique of Latour from the perspective of post-foundational theory, see Marchart 2018, pages 156-165.

[6] They themselves formulate how they differentiate their understanding of hegemony from the one of Gramsci: “It is clear from the above that we have moved away from two key aspects of Gramscian thought: (a) his insistence that hegemonic subjects are necessarily constituted on the plane of the fundamental classes; and (b) his postulate that, with the exception of interregna constituted by organic crises, every social formation structures itself around a single hegemonic centre. As we pointed out earlier, these are the two last elements of essentialism remaining in Gramscian thought.” (Laclau and Mouffe, 2014: 124).

[7] “Wodurch wird Gesellschaft als eine partielle Totalität hervorgebracht?" Schließlich leben wir in keiner sozialen Gaswolke (...) sondern in partiell fixierten und institutionalisierten Formationen, die dem Strömen der Signifikanten oder des Begehrens ein gewisses materielles Beharrungsvermögen entgegensetzen. Eine gesellschaftstheoretisch schlüssige Antwort auf diese Frage lautet: Hegemonie” (Marchart , 2018: 375).

[8] Antagonism: “the equivalential division of a discursive field - which, in tradition of the Saussurian linguistics, is initially conceived of as a system of differences - into two camps. Each pole- resulting of the condensation of differences into a chain of equivalence - annuls its respective positive, differential content, since the only ‘identical something’ that holds the chain together is a common orientation towards ‘what is not’: its negative, threatening outside.” (Marchart, 2007: 140)

[9] Laclau “defines the political as the ‘*instituting moment* of society*’,* and politics as ‘the *acts* of political institution.’ Therefore, the difference seems to lie between the ontological *moment* of the political and the latter’s ontic *enactment (*which is termed ‘politics’).

[10] To be more clear, Marchart adds: “Traditions are nothing but such routinized practices. ‘Insofar as an act of institution has been successful,’ Laclau holds, ‘a forgetting of the origins’ tends to occur; the system of possible alternatives tends to vanish and the traces of the original contingency fade.” (Marchart 2007: 139).

[11] “A case has been made for discourse theory having the status of an *ontology.* As a matter of course, the nature of ‘being’ changes from the perspective of discourse theory - the field of objectivity is now understood in terms of the *discursive* - The theory of ‘being’ turns into a theory of the production *meaning*. Still to call it an ontology, then, is a philosophical way of indicating the radical implications of such a theory, as it does not only apply to language in the usual regional sense of the term, but to the very horizon of all ‘being’. And if,

as our second claim was, *being-as-being*- objectivity as such - is intrinsically political (because it rests on an act of political inception which became sedimented within the social), then such an ontology must be conceived of as a political ontology. So, in opposition to other current philosophies such as Badiou's, where politics is only one out of four regional 'ontologies (love, art, science, politics), from the perspective of discourse theory *every* ontology would be, in its essence, political" (Marchart, 2007: 149).

[12] The "Right to the City" (Le Droit à la Ville) was first published in 1968 and later published in English (1996), see also here: https://theanarchistlibrary.org/library/henri-lefebvre-right-to-the-city

[13] Lefebvre also considered the "Political" as foundational for "politics": Short *of* this (political) sphere, people, groups or nations live and think who are still only part-way along the road that leads via politics to revolutions - or, alternatively, via revolutions to political life. *Beyond* political existence, meanwhile - and hence beyond and established nation state- politics becomes more specific, and political activity more specialized. Politics becomes a profession, and political machines (state and party apparatuses) are institutionalized. This situation in due course gives rise to political criticism - that is, to a radical critique of everyday life and its apparatuses as such; and eventually the political realm will begin to fade away. Once it reaches a certain level of intensity, politicalization selfdestructs" (Lefebvre, 1992: 415-416).

[14] In his book "Critique of Everyday Life" Lefebvre develops "Marxism as Critical knowledge" (158) and then goes on to criticize Marxist for their ignorance of everyday life and politics which he in turn sees to be the arena on which ambiguity and ambivalence arise and in which alienation is countered and fought by people producing "one's own life as one creates a work(see Lefebvre 2014:16). His focus was on the everyday as a scenery of "praxis" because "(E)veryday man(sic!) is the man of praxis, and praxis alone will enable him to free himself from alienation and attain the concrete totality of the 'total man'" (Lefebvre, 2014: 16).

[15] Here I draw mainly on Oliver Marchart's reading of Latour which is very helpful for the formulation of my own critique of anti-foundational approaches: "Entweder nichts ist Gesellschaft oder jedes Ding ist eine Gesellschaft oder nur manche Dinge (wie Panoramen) oder nur die illusorische Stillstellung sozialer Ströme. Diese, milde gesagt, kategoriale Unschärfe verweist auf Latours theoretische Unentschiedenheit bezüglich des Umfangs der Kategorie "*Ding".* Denn, so hatten wir gefragt, besitzen letztlich *alle* Objekte den Status konfliktorisch verfasster *Dinge* oder nur *nur bestimmte* Objekte? Und wenn die Antwort lautet, dass letztlich alle Objekte zumindest *potentialiter* Dinge sind (oder in den Modus des Dings wechseln können), muss dann jene Instanz, die ein Objekt zu einem umkämpften Ding aktualisiert, nicht ontologisch tiefer liegen als das Objekt selbst? Um eine solche Instanz zu erklären, wäre eine ausgearbeitete Theorie der Konfliktualität des Sozialen erforderlich. Es müsste erklärt werden, was denn den Streit generiert, der sich um ein Objekt entfaltet und in den Modus strittiger Dinge wechseln lässt. Dazu müsste eine Theorie anatagonistischer Negativität in den Theoriebau eingeführt werden. Tarde, Deleuze und Latour lehnen jedoch jede Theorie radikaler Negativität explizit ab. Für Theorien reiner Mannigfaltigkeit besitzt die Singularität 'positiver Differenzen' immer ontologischen Vorrang vor jeglicher Negativität" (Marchart, 2018: 162-163).[16]

[17] I am following Katharina Hoppe and Thomas Lemke here in their critical appreciation of work with ANT from Jane Bennett to Karen Barad, Rosi Braidotti and Donna Haraway (amongst others) which I consider very relevant: In Chapter "Die Fallstricke des Posthumanismus" they write: "Drittens verfolgen neomaterialistische Arbeiten im Rahmen ihrer Anthropozentrismuskritik häufig einen normativen Egalitarismus, der die de facto privilegierte Rolle und die asymmetrisch zerstörerische und unterdrückerische Macht 'des Menschen' auf andere Körper einzuwirken, verschleiert. Es ist jedoch für politische Projekte

unverzichtbar, die Kritik an der ‘anthropologischen Matrix’ durch einen ‘strategischen Anthropozentrismus’ zu ergänzen, der die fortdauernde Verantwortung der Menschen für die Gefährdung der Lebensbedingungen auf dem Planeten sowohl für Menschen als auch für Nicht-Menschen anerkennt.” (Hoppe and Lemke, 2023: 146). They conclude: “Es besteht die Gefahr, dass viele kritische und analytische Ressourcen, die innerhalb des Humanismus zur Verfügung stehen, durch den Wechsel in das Register des Posthumanismus verloren gehen. Anstatt die Grenzen zu befestigen und an einfachen Gegensätzen festzuhalten, scheint es vielversprechender, Gemeinsamkeiten zu erproben und Spannungen herauszuarbeiten” (Hoppe and Lemke, 2023: 146-147).

[18] Today, Chaim Yacobi is Professor of Development Planning at UCL https://www.ucl.ac.uk/bartlett/development/people/prof-haim-yacobi

[19] Part of the edited volume in META is also an interview that Ezgican Oezdemir and I conducted with Ronen Shamir. It is part of the attachments to this dissertation.

[20] Dr. Carola Westermeier, Institute of Sociology, JLU Gießen.

[21] He states: “Similarly, Nolte and Westermeier (2020) demonstrate how the co-production of urban security infrastructures is dependent on the interaction between public and private-sector actors. Through an ethnographic study of an Israeli urban security conference, they show how the securitization of infrastructure draws on public as well as private-sector expertise, even to the extent that the distinction between the public and private sectors blurs” (Markussen, 2023).

[22] Dr. Raffael Beier, Technische Universität Dortmund, https://ips.raumplanung.tu-dortmund.de/fachgebiet/team/dr-raffael-beier/

[23] Dr. Philipp Lottholz, Centre for Conflict Studies, Philipps-University Marburg

[24] Yoav Gallant, October 9th 2023, https://www.timesofisrael.com/liveblog_entry/defense-minister-announces-complete-siege-of-gaza-no-power-food-or-fuel/

References

Ahmed S (2014) *The Cultural Politics of Emotion*. Edinburgh University Press.

Anderson B (2009) Affective Atmospheres. *Emotion, Space and Society* 2(2):77-81.

Aradau C (2010) Security That Matters: Critical Infrastructure and Objects of Protection. *Security Dialogue* 41(5): 491–514.

Balzacq T, Basaran T, Bigo D, Guittet E.P. and Olsson C (2010) Security Practices. *International Studies Encyclopedia Online.*

Barney D (2018) Infrastructure. *Krisis: Journal for contemporary philosophy.* Available at: https://archive.krisis.eu/infrastructure/. (accessed 17 October 2023).

Beier R and Nolte, A (2020) Global aspirations and local (dis-)connections: A critical comparative perspective on tramway projects in Casablanca and Jerusalem. *Political Geography* 78: 102-123.

Bowker G C. and Leigh Star S (2000) *Sorting Things Out. Classification and its consequences*. MIT Press.

Bowker G (2015) Temporality in: Appel, Hannah, Nikhil Anand, and Akhil Gupta. "The Infrastructure Toolbox." Theorizing the Contemporary, *Fieldsights*. Available at: https://culanth.org/fieldsights/ends. (accessed 17 October 2023).

Broecker H and Westermeier C (2019) Securitization as Hegemony in Langenohl A und Kreide R (eds.) *Conceptualizing Power in Dynamics of Securitization: Beyond State and International System.* Baden Baden: Nomos Verlag.

Buzan B, Waever O and de Wilde J (1998) *Security: A New Framework for Analysis.* Lynne Rienner Publishers Inc.

Castells M (2006) *The Network Society: From Knowledge to Policy.* John Hopkins Center for Transatlantic Relations: Washington, DC.

Chu J (2014) When Infrastructures Attack: The workings of Disrepair in China. *American Ethnologist* 41 (2):351-367.

Coole D and Frost S (2010) Introducing the New Materialism in Coole and Frost (eds.) *New Materialisms, Ontology, Agency, and Politics.* Durham/London: Duke University Press.

Cowen D (2017) Infrastructures of Empire and Resistance. Available at: https://www.versobooks.com/en-gb/blogs/news/3067-infrastructures-of-empire-and-resistance (accessed 17 October 2023).

Cowen D (2020) Following the infrastructures of empire: notes on cities, settler colonialism, and methods. *Urban Geography* 41 (4): 469-486.

Dalakoglou D (2017) *The Road. An Ethnography of (Im)mobility, Space, and cross-border infrastructures in the Balkans*. Manchester University Press.

DeLanda M (2006) *A New Philosophy of Society.* London & New York: Continuum.

Dunlap A (2023) The Structures of Conquest: Debating Extractivism(s), Infrastructures and Environmental Justice for Advancing Post-Development Pathways. *International Development Policy | Revue internationale de politique de développement.* Epub ahead of print 02 May 2023. DOI: https://doi.org/10.4000/poldev.5355

Farias I and Stemmler S (2012) Deconstructing ‘‘Metropolis’’. Critical reflections on a European concept. In Brantz D, Disko S, & Wagner-Kyora G (eds.), *Thick space. Approaches to metropolitanism*. Bielefeld, Piscataway, NJ: Transcript; [distributor] Transaction Publishers (Urban studies), 31-48.

Fioravanti C and Velho L (2010) Let’s follow the actors! Does Actor-Network Theory have anything to contribute to science journalism? *Journal of Science Communication* 9(4).

Folkers A (2017) Existential Provisions: The Technopolitics of Public Infrastructure. *Environment and Planning D: Society and Space.* 35 (5): 855-874.

Folkers A (20*18) Was ist kritisch an kritischer Infrastruktur? Kriegswichtigkeit, Lebenswichtigkeit, Systemwichtigkeit und die Infrastrukturen der Kritik in Engels J I and Nordmann A (eds.) Was heißt Kritikalität?Zu einem Schlüsselbegriff der Debatte um Kritische Infrastrukturen.* Transcript Verlag.

Gordon C and Foucault M (1980) Power/Knowledge: Selected Interviews and Other Writings 1972-1977. New York.

Gunesch J and Nolte A (2020) Failing Better Together? A Stylised Conversation about Fieldwork. In : Kušić, K and Záhora J (eds) *Fieldwork as Failure: Living and Knowing in the Field of International Relations,* E-International Relations Publishing.
Gupta, A (2015) Suspension in: Appel, Hannah, Nikhil Anand, and Akhil Gupta (eds.) The Infrastructure Toolbox. Theorizing the Contemporary, *Fieldsights*. Available at: https://culanth.org/fieldsights/ends
Hallinan B and Gilmore J N (2021) Infrastructural politics amidst the coils of control, *Cultural Studies* 35: (4-5): 617-640.
Harvey P and Knox H (2015) *Roads. An Anthropology of Infrastructure and Expertise*. Cornell University Press.
Harvey P, Jensen C and Morita C (eds) (2017) *Infrastructures and Social Complexity: A Companion.* Routledge.
Hoppe K and Lemke T (2023) *Neue Materialismen. Zur Einführung.* Junius Verlag
Jensen C B and Morita A (2015) Infrastructures as Ontological Experiments. *Engaging Science, Technology, and Society* 1: 81–87.
Jensen C P (2015) Experimenting with Political Materials: Environmental Infrastructures and Ontological Transformations. *Distinktion: Journal of Social Theory* 16 (1):17–30.
Kathiravelu L (2021) Introduction to Special Section 'Infrastructures of Injustice: Migration and Border Mobilities' *Mobilities*. Epub ahead of print 8 October 2021. DOI:10.1080/17450101.2021.1981546
Knox H (2017) Affective Infrastructures and the Political Imagination. *Public Culture* 29 (2 (82)): 363–384.
Krasmann S and Hentschel C (2019) 'Situational Awareness': Rethinking security in times of urban terrorism. *Security Dialogue* 50(2):181-197.
Laclau E (1990) *New Reflections on the Revolution of our time*. London and New York: Verso.
Laclau E and Mouffe C (2014) *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics.* Verso Books.
Langenohl A (2020) Articulating Sovereignty within the Infrastructural Imagination: The Case of the Securitisation of Finance as 'Critical Infrastructure.' *Politikon*. Epub ahead of print 27 January 2020. DOI: 10.1080/02589346.2020.1712830.
Larkin B (2018) *The Promise of Infrastructure.* Duke University Press.
Larkin B (2013) The Politics and Poetics of Infrastructure, *Annual Review of Anthropology* 42:1: 327-343
Latour B (1990) Drawing Things together. In: Lynch D and Woolgar S (eds.) *Representation in Scientific Activity.* Cambridge Mass: MIT Press, 19-68.
Latour B (1992) Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts. In: Bijker W and Law J (eds.) *Shaping Technology-Building Society. Studies in Sociotechnical Change*. Cambridge: MIT Press, 225–259.
Latour B (2004) Why has Critique run out of steam? *Critical Inquiry.* 30(2): 225–248.
Latour B (2005) *Reassembling the Social: An Introduction to Actor-Network-Theory.* Oxford, New York; Oxford University Press.
Lefebvre H (1992) *The Production of Space.* Blackwell Publishing.
Lefebvre H (2014) *The Critique of Everyday Life.* Verso.
Mann M (1984) The autonomous power of the state: its origins, mechanisms and results. *European Journal of Sociology / Archives Européennes de Sociologie / Europäisches Archiv für Soziologie* 25 (2): 185–213.
Marchart O (2007) *Post-Foundational Political Thought: Political Difference in Nancy, Lefort, Badiou and Laclau.* Edinburgh University Press.
Marchart O (2018) *Das unmögliche Objekt: Eine postfundamentalistische Theorie der Gesellschaft.* Suhrkamp Taschenbuch Wissenschaft.
Markussen H. R. (2023) Covid-19 contact-tracing apps and the public/private co-production of security. *Security Dialogue*, *0*(0). Epub ahead of print 16 September 2023. DOI: https://doi.org/10.1177/09670106231194919
Mezes C (2023) Pandemic Preparedness Monitoring. Infrastructural Analysis of Global Health Security's Accountability Politics. Unpublished Dissertation.

Mouffe C (2014) By Way of a Postscript. *Parallax* 20(2): 149–157.
Nolte A and Yacobi C (2015) Politics, infrastructure and representation: The case of Jerusalem's Light Rail. *Cities* 43: 28-36.
Nolte A (2016) Political infrastructure and the politics of infrastructure. *City* 20(3): 441-454.
Nolte A and Özdemir E (2018) Infrastructuring Geographies: Histories and Presents in and of the Middle East and North Africa. *Middle East - Topics & Arguments.* Epub ahead of publishing 10 June 2018. DOI: 10.17192/meta.2018.10.7794.
Nolte A and Westermeier C (2020) Between Public and Private: The Co-production of Infrastructural Security. Politikon. Epub ahead of print 16 January 2020. DOI: 10.1080/02589346.2020.1712831
Ochs J (2011) *Security and Suspicion: An Ethnography of Everyday Life in Israel.* Philadelphia: University of Pennsylvania Press.
Ong A and Collier S J (eds.) (2007) *Global Assemblages: Technology, Politics and Ethics as Anthropological Problems.* Malden, MA:Blackwell Publishing.
Opitz und Tellmann (2016) Europe's Materialism: Infrastructures and Political Space. Available at: https://limn.it/articles/europes-materialism-infrastructures-and-political-space-2/. (accessed 17 October 2023).
Peoples C and Vaughan-Williams N (2015) *Critical Security Studies: An Introduction.* London: New York, Routledge.
Simone, A (2021) Ritornello: People as Infrastructure. *Urban Geography* 42:(9): 1341-1348.
Staff T (2023) Years of subterfuge, high-tech barrier paralyzed: How Hamas busted Israel's defenses. *Times of Israel*, 11 October. Available at: https://www.timesofisrael.com/years-of-subterfuge-high-tech-barrier-paralyzed-how-hamas-busted-israels-defenses/ (access 17 October 2023).
Tulumello S (2021) Agonistic security: Transcending (de/re)constructive divides in critical security studies. *Security Dialogue 52*(4): 325-342.
Von Schnitzler A (2015) The Infrastructure Toolbox, *Ends*, September 24. Available at: https://culanth.org/fieldsights/ends. (accessed 17 October 2023).
Von Schnitzler A (2016) *Democracy's Infrastructure: Techno-Politics and Protest after Apartheid*. Princeton University Press.

Contributions to cumulative dissertation A - F

A Politics, infrastructure and representation: The case of Jerusalem's Light Rail

Co-author: Haim Yacobi, Department of Politics and Government, Ben Gurion University, Israel.

Published in: *Cities* 43 (2015), p. 28–36.
DOI 10.1016/j.cities.2014.10.011

Introduction

> *"[T]he built environment, the material, physical and spatial forms of the city, is itself a representation of specific ideologies, of social, political, economic, and cultural relations and practices, of hierarchies and structures, which not only represent but also, inherently constitute the same relations and structures" [King, 1996:4].*

En route from Mount Herzl in the west of Jerusalem to Damascus Gate, the heart of East Jerusalem, the Light Rail has profoundly changed the urban face of Jerusalem in only a matter of years. Jaffa Road, once the biggest and most congested street in West Jerusalem, is now a wide, clean and open boulevard (Fig. 1). There are no cars or buses amidst the pedestrians anymore. No traffic noise disturbs the shopping-routine in the heart of the western city. Since 2011, only the Light Rail runs along Jaffa Road, connecting east to west Jerusalem in less than an hour. Upon its launch only two years ago, the Light Rail quickly became a comfortable and popular means of transportation for many sections of Jerusalem's population. Today, it is highly frequented and regularly crowded. At face value, young and old, men and women, religious and non-religious, Jewish Israelis, Arab Israelis and Palestinian Jerusalem residents alike hop on and off the Light Rail. Stations are announced in Hebrew, Arabic and English and enabling locals and visitors to orientate themselves (Fig. 2).

Fig. 1. Jaffa Road and the Light Rail (photographer: Haim Yacobi).

Fig. 2 The Light Rail station (photographer: Haim Yacobi).

However, as the Light Rail is becoming a part of Jerusalem's cityscape, nothing about it is ordinary: For example, at times the train suddenly stops, all passengers have to disembark immediately while special forces enter to defuse suspicious items. Minutes later, life returns to ''normal'', leaving a confusing impression of danger and fear that seems to have been incorporated into normality in Jerusalem. Beyond this, the controversial role (JTA, 2013; Kershner, 2007; Rapoport, 2006) of the Light Rail in Jerusalem's urban fabric pertains to the way it is planned, run and represented, which makes it subject to a number of contentious acts that target the hegemonic imposition of the Israeli claim over all of Jerusalem.

Based on fieldwork carried out from August 2013 to April 2014 which included documentation, data collection, archival research as well as observations (Finnegan, 1998; Hastings, 1999; Scollon, 1998), in this article we seek to critically analyse the public representation of the Light Rail in Jerusalem. The Jerusalem Light Rail was launched in 2011. It was built by the CityPass Consortium, which consists of four Israeli companies and the French companies Connex and Veolia. The line is about 14 km long and has 23 stops. It connects Mount Herzl in the southwest of Jerusalem to Heil HaAvir in the northeast (Jerusalem City Pass) While the contract for the Light Rail was signed in 2002, the actual construction began in April 2006 and was only completed in August 2011. Officially, the Light Rail is praised as a means of urban development and modernity that is to the equal benefit of all the people in Jerusalem, Israelis and Palestinians altogether. Yet, we argue that in reality its meaning is more controversial. It hinges on the contribution the Light Rail makes to the intricate fabric of urban life in Jerusalem, the practice of everyday encounters it promotes (or not) between the residents, and the lived experiences of integration/separation in Jerusalem it thereby provokes.

This article will only focus on the way the implementation of the Light Rail was and is entangled with discourses that portray it as a neutral, modern and efficient means of transportation for Jerusalem as a ''metropolis'', legitimizing the connection between the West of the city with the East, creating facts on the ground against the background of a controversial territorial and political situation. The Jerusalem Metropolis, as we will detail throughout this article, is a geopolitical entity constructed upon Israel's aim to create ''unified Jerusalem''. By emphasizing the

typical urban planning priorities such as relieving traffic congestion and renewal of the city center, the discourse on the Light Rail and its actual route are rooted in a development discourse that shapes itself through the demarcation against ‘‘the other’’ that is not modern, planned and developed (LeVine, 2005: 16). Rather, the Light Rail also serves to strengthen the control over Greater Jerusalem as a ‘‘unified city’’ (Barghouti, 2009: 47; Yacobi, 2012: 57) and thereby enforcing Jewish Israeli hegemony over the entirety of Jerusalem. Thus, the meaning of the Light Rail goes beyond physical facts on the ground and this exploration scrutinizes its functionalist appeal as a governmental means of control that institutes mental and normative ruptures in urban life.

Shifting the discussion into the discursive and symbolic representation of infrastructure projects (such as the Light Rail) stems from the body of knowledge about space as both the precondition and result of the social superstructure (Finnegan, 1998; Hastings, 1999; Scollon, 1998). The city as the urban sphere is hence a space that is fashioned, shaped and invested by social activities. According to Lefebvre, ‘‘any space implies, contains and dissimulates social relationships – and this despite the fact that a space is not a thing but rather a set of relations between things (objects and products)’’ (Lefebvre, 1991: 83). While space is socially produced and reproduced in connection with the forces of production (and with the relations of production), ideologies are deemed responsible for serving to conceal the use of productive forces in the city. Ideologies, according to Lefebvre, present themselves as established knowledge and can therefore be seen as discourses of truth that try to dominate the representation of space (Lefebvre, 1991: 95). Specifically, in this article we will critically study the structure of the Light Rail by looking at it as a space-related practice, that is a contingent collection of heterogeneous elements such as symbols, politics, discourses, bodies and nature (Höhne, 2012: 148).

For this study of the representation of the Light Rail to Jerusalem’s public, we will hence focus on the discursive and symbolic part of its representation. We seek to look at the way the establishment of the rail was accompanied by a massive campaign to legitimize its existence and to naturalize Jewish-Israeli predominance over all of Jerusalem, claiming it as one unified city. Particularly we will look at the way symbols and signs are used to connect the Light Rail to a wider discourse of Jerusalem as a modern ‘‘metropolitan’’ unified city, offering easy transportation, leisure and lifestyle to all its citizens. Thus, the representation of a highly contested city is at stake.

The study of the representation of the Light Rail comprises of the analysis of two selected parts of the Light Rail assemblage: the descriptive presentation of the rail on its homepage (English and Hebrew), depicting the Light Rail as a part of ‘‘metropolitan’’ Jerusalem; and a poster advertising the 2013 Jerusalem Marathon, in which the Light Rail is integrated into the presentation of Jerusalem as a modern and dynamic city. Thus, all this needs to be read against the heated debate and controversy over Jerusalem as a politically, territorially and socially highly contested city.

Indeed, it is important to consider the context in which cities and its landscape are not just there, but are made as an outcome of political and social relations and struggles for power (Yacobi, 2004: 6). Lefebvre has pointed to the city as an outcome of political power-relations, and other political scientists have also added to the ongoing debate about the nexus between spatial planning and social control as an inherent political phenomenon. In his important contribution, Oren Yiftachel has described the ethnonational bias that underlies planning. In his article (1998) he discussed the ‘‘dark side of planning’’ in which he analyzed the ‘‘way in which states become complicit in favoring one group over the other’’ (Yiftachel, 1998: 400) and its reflection in planning and social engineering of the city. He sees planning as a tool for the

nation state to produce and reproduce its own national space by means of segregation and its containment of ethnic minorities.

By equally emphasizing the association between social and spatial control, Mazza (2009) has added some valuable insights to the debate by highlighting the role of authorities in promoting their own ideological principles through acts of planning (Mazza, 2009: 132) and to legitimate national ideological choices. From his perspective ‘‘planning is not only the art of building cities, it is an instrument of governance’’ (Mazza, 2009: 114) that exerts spatial and thus social control by means of distinction of inclusion and exclusion (Mazza, 2009: 131). While the power of distinguishing between spatial inclusion and exclusion is manifest in ‘‘space-related practices’’ (Höhne, 2012: 148), it not only assumes a landscape that is subject to and shaped by power-relations (Fields, 2010: 64) and the power to plan and design the built environment but also its ultimate representation.

In the struggles, the city as a social entity ‘‘can hardly be conceptualized without a physical infrastructure of buildings, streets, and various conducts for the circulation of matter and energy’’ (Höhne, 2012: 149). Their capacity to connect and disconnect people, hence to decide over the in- and exclusion of certain population-groups makes them a highly powerful political tool that is not only at the heart or foundation of a city, but actually constitutes it (Höhne, 2012: 149).

The government’s and city-planners’ capacity to address political and social questions via infrastructural implementations and thereby framing them under the premises of social engineering (Höhne 2012: 153; Yiftachel, 1998: 401) is characteristic of political regimes. This ‘‘politics of infrastructure’’ (Young and Keil, 2010: 87) pertains not only to the implementation of infrastructure as a spatial practice (Lefebvre 1991: 38), but also its representation through space-related practices such as in artifacts, symbols, and discourses that attend those spatial practices. Through the way they present, represent, display and narrate the need for infrastructure, its establishment, route and labeling, they contribute highly to the legitimization and justification of its existence, even if it is part of a highly controversial project in a politically, socially and territorially highly contested city such as Jerusalem (Pullan, 2013).

Jerusalem-infrastructure in a colonial city

Jerusalem is the object of two competing national aspirations – Israelis and Palestinians – and to the religious claims of the three monotheistic religions of Judaism, Christianity and Islam. In the wake of the hostilities between Israel and its Arab neighbors in the 1940s, the international community attempted to give Jerusalem the status of an international city in 1947 but those attempts failed due to the ongoing Arab–Jewish clashes and the outbreak of the 1948 war after Israel’s declaration of independence (Shlay and Rosen, 2010: 364). Jerusalem was divided between Israel (western part) and Jordan (eastern part) (Thawaba and Al-Rimmawi, 2012: 64; Rokem, 2012: 3), the armistice line was called the ‘‘Green Line’’ in the Rhodes agreement of 1949 (Shlay and Rosen, 2010: 365). In the 1967 war between Israel and its Arab neighbors, Israel captured and occupied (Klein, 2005) East Jerusalem and ‘‘adopted a multifaceted strategic plan to expand and control Jerusalem, and with amendments to existing legislation and administrative orders, applied its law to an area three times the size of prewar Jerusalem. The state executed an ‘occupation through municipal expansion’ (Lustick, 2004: 202), vowing that Jerusalem will never be divided again’’ (Shlay and Rosen, 2010: 366).

In 1980, Israel annexed East Jerusalem, stressing the role of Jerusalem as the ‘‘eternal capital of the Jewish people, a city reunified so as never again to be divided’’ (Yacobi, 2012: 55). While the international community has never recognized Israel’s claim to the eastern part of Jerusalem and rejected it in the UN Security Council Resolution number 478 in 1980 declaring it a

violation of international law (United Nations, 1980), the Israeli authorities set out to strengthen the physical and discursive control over the whole city, ‘‘the aim being to create ‘urban facts’ which would make any future division of the city practically impossible’’ (Chiodelli, 2012a, 2012b: 6). Despite being claimed as the political, cultural and religious capital by the Palestinian population of Jerusalem, Israel annexed the eastern part of the city and enacted this claim as part of the Israeli Basic law (Mahler, 2010: 103), making the eastern and hence Palestinian part of Jerusalem legally an inseparable part of Jewish-Israeli Jerusalem (Klein, 2005: 66) under the administration of the Greater Jerusalem Municipality. While claiming the land as part of ‘‘united Jerusalem, a fixed urban space, a given subject of Israeli sovereignty and ethno-national aspirations’’ (Yacobi, 2012: 55) the Jerusalem Municipality embraced the expansion of territory while constantly working toward containing the expansion of its Arab population through means of planning and restructuring the city (Chiodelli, 2012a, 2012b: 7). This process created the Jerusalem metropolis as a geopolitical entity, orchestrated by Israel.

This fact is especially obvious in the way the Palestinian population of East Jerusalem was treated after its supposed reunification: While the territory of East Jerusalem became officially part of unified Jerusalem, most of its Palestinian inhabitants, despite being born in the city, are neither citizens of the State of Israel (Cheshin, Hutman and Melamed, 1999), nor part of the city’s self-understanding as a Jewish city (Chiodelli, 2013: 417). Since Israel’s illegal annexation of East Jerusalem in the 1967, ‘‘most Palestinian Jerusalemites are ‘permanent residents’ under Israeli law, permitted to exercise a limited set of rights: they may live and work in Israel, travel to and from the West Bank, collect some social benefits and vote in municipal elections.’’ (Jefferis, 2012: 95). As residents, they can lose their residency status at any time if they are not able to prove that Jerusalem is the ‘‘center of their life’’ (Jefferis, 2012). While claiming that Jerusalem is an ‘‘open city’’ that is a place of harmony where Jews, Muslims and Christians could live peacefully side-by-side under Israeli sovereignty, the Israeli authorities also consider it to be their national capital, and do not acknowledging the existence of any other claims to Jerusalem (Klein, 2005: 54). While doing so, the Jerusalem Municipality, which is based in West Jerusalem and governs the whole city, is constantly working toward Judaization of the city, i.e. promotion of both Jewish urban and demographic expansion in the eastern part of the city and de-Palestinization, i.e. the containment of Arab expansion of Jerusalem (Chiodelli, 2012a, 2012b: 7, 2013: 417; Safier, 2001: 141). The expansion of the administrative control East Jerusalem and the development of Jewish ‘‘neighborhoods’’ in East Jerusalem led to a development that Shlay and Rosen have labeled ‘‘the shifting Green Line’’ (Shay and Ronen, 2010) which describes the process of constantly locating and relocating of the border by political, administrative and military means by the Israeli authorities.

In 2004, Israeli authorities launched a Master Plan that outlined the idea and development of a unified metropolitan Jerusalem until the year 2020. The plan aimed to retain a demographic balance of 40% Palestinian to 60% Jewish population (Chiodelli, 2012a, 2012b: 10; Jabareen, 2010; Rokem, 2012: 8). Many authors have pointed to the political and ethno-national bias underlying the objectives of the Jerusalem Master Plan in which the Jewish population is favored over the Arab–Palestinian population in Jerusalem (Chiodelli, 2013: 54, 2012a, 2012b: 8; Yiftachel, 1998: 400; Rokem, 2012:6). The 60–40% population ratio was to be achieved through the containment of Palestinian population growth and through continuing Jewish expansion in and around East Jerusalem. While Jewish settlements constantly grow (Chiodelli, 2013: 51) in and around the city, the Municipality has rendered the establishment of a Palestinian social, cultural and economic center impossible (Chiodelli, 2013: 54) through a constant segregation and fragmentation of the Palestinian neighborhoods, making it ‘‘a mosaic of enclaves within enclaves resulting in a non-homogenous urban fabric’’ (Thawaba and Al-Rimmawi, 2012: 70). For instance, the Jerusalem Municipality applies the Absentee Property Law

(Forman and Kedar, 2004: 815) in order to take over or demolish Palestinian houses and obstruct construction in Palestinian neighborhoods. It also does not provide those neighborhoods with basic services that are sufficient or equivalent to those supplied to Jewish neighborhoods. There are few means of public transportation linking these neighborhoods with each other, let alone with western Jerusalem (Thawaba and Al-Rimmawi, 2012: 71; Klein, 2005: 74).

Meanwhile, Israeli settlements, even to the east and north-east of East Jerusalem are provided with all socio-economic services, ''if not within the settlement itself then along with the bypass roads and railroad to facilitate getting these services'' (Thawaba and Al-Rimmawi, 2012: 71). Through a sophisticated network of roads, built since the 1970s and especially after the first Oslo Accords in 1993 (Pullan et al., 2007: 176), connecting the heart of West Jerusalem with the Jewish settlements in the periphery to the east and north-east of Jerusalem, the Israeli authorities have created infrastructural facts that are characterized by an almost complete territorial continuity and therefore blur the boundary between west and east of the Green Line. Beyond this, they also attributed ''a sense of normality to the settlements, which suggests that they are not at the frontier, but a natural expansion of suburbia'' (Pullan et al., 2007: 182).

The Light Rail

> *''(The) Development of the Light Rail line is bringing prosperity and growth to the city's real estate and business sectors, an upsurge in cultural and entertainment centers, and accessibility to the downtown area for residents of large neighborhoods, such as Pisgat Ze'ev''* (Jerusalem City Pass, n.d.).

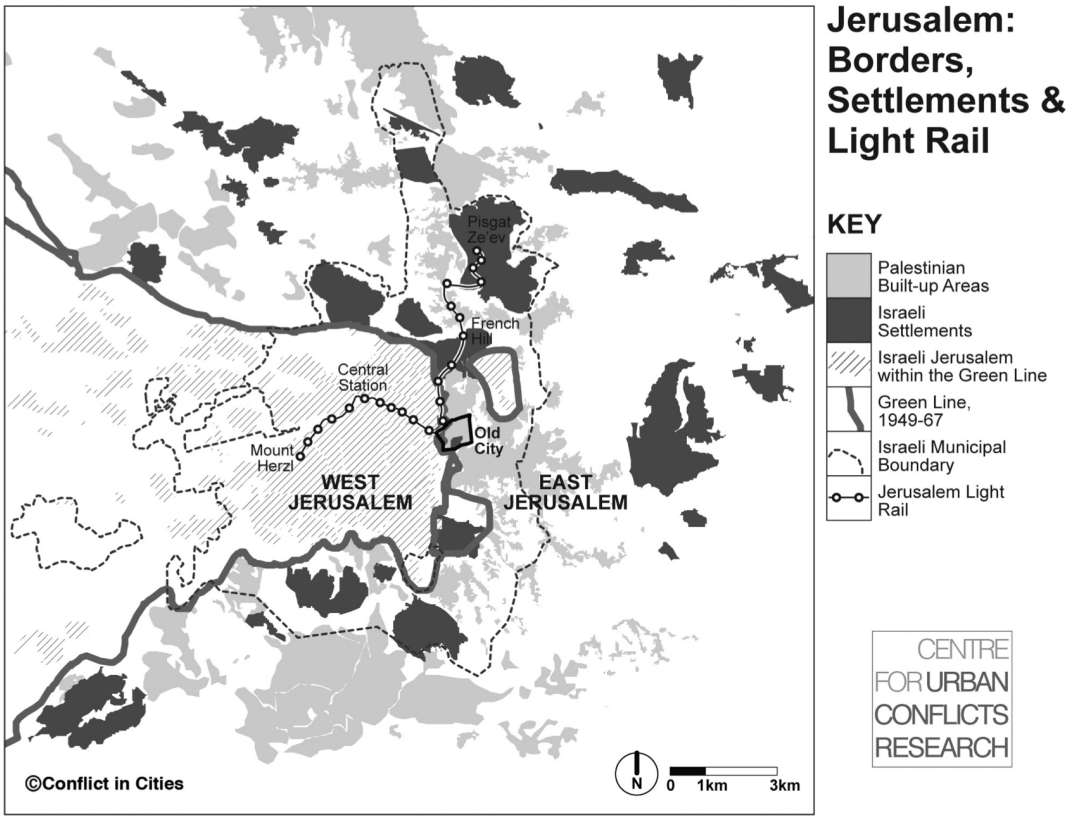
In addition to the extended network of highways, roads and bypass-roads that not only connect West Jerusalem to the Jewish settlements in East Jerusalem, but also to the contested Jewish settlements in the West Bank (all of which are illegal under international law), the Israeli government approved the establishment of a Light Rail project for Jerusalem in the year 1999 (Shlay and Rosen, 2010: 376; Thawaba and Al-Rimmawi, 2012: 68). Following basically the same route as Route no. 1 (Yacobi and Nolte, 2015) toward the east, the Light Rail connects the western side of Jerusalem with the Jewish neighborhoods in East Jerusalem (Thawaba and Al-Rimmawi, 2012: 68; Barghouti, 2009: 48). As a part of the Master Plan for Jerusalem that aimed to hinder Palestinian growth in Jerusalem while expanding Jewish presence and domination throughout the city, the Light Rail was the ''brainchild of the Jerusalem Transportation Master Plan, jointly administered by the Ministry of Transport and the Jerusalem Municipality'' (Barghouti, 2009: 48) (Fig. 3).

The planning and establishment of the Light Rail system from West to East Jerusalem did not pass without controversies and criticism. While Israeli officials claimed that the Light Rail would serve all its residents equally by connecting the growing modern metropolis, relieve traffic congestion, provide public transportation and support efforts to renew the city's declining center (Shlay and Rosen, 2010: 376), Palestinians and international NGOs claimed that the Light Rail was yet another step in the colonial occupation of East Jerusalem (Barghouti, 2009: 48–49). The PLO Negotiation Unit issued a statement, saying:

> *''As an occupant, Israel has no sovereign rights or title to the OPT (Occupied Palestinian Territories), including East Jerusalem. Consequently, it may only undertake changes in East Jerusalem and the rest of the OPT for the benefit of the occupied Palestinian population or for military necessity. As the Light Rail neither caters to the needs of Palestinian civilians nor serves any genuine military purpose, the Light Rail constitutes an illegal change to East Jerusalem and neighbouring West Bank areas''* (Barghouti, 2009: 49).

A legal case was filed against the French companies Veolia and Alstom (Railway Technology), two of the constituent companies involved in the consortium that signed the contract with the

State of Israel to build and manage the Light Rail (Barghouti, 2009: 49). In addition, more than 170 Palestinian political parties, unions, organizations and networks, ‘‘representing a substantive majority of Palestinian civil society, issued a historic call for Boycott, Divestment and Sanctions, or BDS’’ (Barghouti, 2009: 50) opposing international support and economic cooperation for the Light Rail project (Barghouti, 2009).



Map 1. Jerusalem: borders, settlements and Light Rail.

Fig. 3 Map: Jerusalem: borders, settlements and Light Rail.

Opponents of the Light Rail project claim that the implementation of the project is helping to not only to legitimize but also to intensify and consolidate the Jewish claim over Jerusalem. On the other hand, the Light Rail does not only serve the Jewish population of Jerusalem but also the Palestinian Jerusalemites. Connecting from the City center in West Jerusalem to its last stop in Heil Ha Avir, the train stops at three stations in Palestinians neighborhoods, notably El-Sahl, Shufa’t and Beit Hanina. Palestinians can frequently be seen using the Light Rail, mingling on their way home with the Jewish residents that live on the eastern side of the Green Line in the settlements. Hence the physical continuity that the Light Rail provides cannot be seen as dividing the city along its route into two isolated sides. It is rather the continuity it provides that is at stake while looking at the complex and contested political situation. The scope of the project, its territorial expansion and financial costs rendered the Light Rail into an integral part in Jerusalem’s urban fabric, turning it into ‘‘conflict infrastructure’’ (Pullan, 2013: 17) that connects the city physically and segregates it politically at the same time.

It is amidst this controversial political situation that the Light Rail was finally established and completed in the year 2011. Regarding the controversy that evolved around its construction, the route and the involvement of international companies, the representation of the Light Rail in public discourse was far less contested, at least when it comes to its official presentation to the public. Through public campaigns, online advertisement and the placement of the Light

Rail on posters and murals in Jerusalem, the Municipality of Jerusalem launched a major promotional offensive, praising the modern technology of the Light Rail and the facilitation of easy transportation within the city for all its ''residents''.[19] This is, as we suggest in the following analysis of the representations of the Light Rail, integral to the idea of creating a societal consensus of Jerusalem as an ''open'' and unified city (Klein, 2005: 54), presenting it as a cosmopolitan ''metropolis'' to its (Jewish) residents and international visitors and tourists.

Infrastructure as the making of history

> *''Binyamin Ze'ev Herzl, Israel's visionary, foresaw an electric train traversing the streets of Jerusalem. In 1902 he wrote the following in his utopian book Altneuland; 'Then she had been a gloomy, dilapidated city; now she was risen in splendor, youthful, alert[. . .] Outside the walls the picture was altogether different. Modern sections intersected by electric street railways; wide, tree-bordered streets [. . .] a twentieth century metropolis'.''* (Transportation Master Plan Team, n.d.).

This paragraph, taken from the joint webpage of the Jerusalem Municipality and the Israeli Transportation Ministry, depicts the planning and construction of the Light Rail under the rubric ''*Making History*'' as an integral part of the Zionist vision of Israel and its ''*national capital*''(Transportation Master Plan Team). Here, the planning and constructing of infrastructure is described as an inherent part of Herzl's utopian novel, (Herzl, 1902) linking his novelist vision of a Zionist city to the existing city of Jerusalem, claiming it the national capital of Israel and a ''*metropolis''* (Transportation Master Plan Team). Jerusalem and its Light Rail are presented as the embodiment of a modern, European and well planned capital, serving its inhabitants with ''*innovative transportation projects*'', ''*developing advanced models for increasing its (Jerusalem's) accessibility*'' (Transportation Master Plan Team) and contributing to ''*reducing environmental pollution; and preserving a healthy, green environment*''. While the advantages of the Light Rail are prominently stressed, such as ''*improving the city's transportation"* and ''*restoring the city's charm and appeal"*, the Light Rail is depicted as a ''*Transportation Revolution''* (Transportation Master Plan Team) that indicate that Jerusalem is entering a ''*new era''*. The text clearly stresses the importance of connecting West-Jerusalem, the ''*the city center's main thoroughfare"* as the core and heart of Jerusalem, to the ''*large neighborhoods, such as Pisgat Ze'ev"*, one of the largest Jewish settlements in East Jerusalem.

Great effort is being invested in stressing the ''independent, unbiased nature of the team''[26] which was chosen to develop a thorough plan for the city's infrastructure and to ''address the following issues: parking, traffic arrangements, overpasses and tunnels, and a master plan for regulating public transportation in East Jerusalem''. Emphasizing the neutral and functional approach that these ''experts'' and ''planners'' developed toward their task, it is also said that ''the involvement of the relevant experts, such as historians, religious figures and representatives of various sectors of the population'' was ensured in order to take into consideration the ''sensitive'' situation. What this ''sensitive'' situation actually means is not further explained. Throughout the texts on the webpage, the populations of Jerusalem are only described as ''residents'', no sentence of the description hints to the existence of an Arab or Palestinian population and no political and social divide of the city is mentioned, except the explicit necessity of ''regulating public transportation in East Jerusalem''. Further, under the rubric ''Challenges'', the text states that ''Jerusalem is a city of great religious, cultural and historic sensitivity; only a thin line separates the peaceful coexistence of its inhabitants and their angry protests.'' Again, this statement is not further explained or elaborated on. The text concludes that with the implementation of the Light Rail, Jerusalem has entered a ''new era'' and can today be considered ''Israel's leading city'', praising the efforts that have been invested in order ''to create a truly united Jerusalem''.[27]

This representation of the Light Rail project in the wider context of a representation of Jerusalem is part of the hegemonic narrative that the Israeli municipality employs for Jerusalem. The nexus between the spatial practice of constructing the Light Rail and its representation as a functional, modern and resident-serving city-tool can be seen as an ideological enterprise that is not only realized in and through space, but also by means of the hegemonic interpretation of space.

In this specific context, it is the functionalist development discourse, linked to a national ideology, that is enacted to conceal the politically deeply divided situation of Jerusalem. While employing a language of neutrality and progress, the Light Rail project is presented as an improvement for Jerusalem, attaining to ''societal (modernist) goals, such as residential amenity, economic efficiency, social equity, or environmental sustainability'' (Yiftachel, 1995: 216). The term ''modern'' has thereby turned into a key-word that seems to not require any further explanation or justification. Usually, it is associated with improvement, amendment and progress (Yiftachel, 1995: 216), so something that is modern is considered useful in a way that it does not need to be questioned. Yet, Mark Levine has pointed to the ''inherently colonial constitution of the project of modernity'' (2005: 24). Linking the Zionist discourse of progress, development and modernization, LeVine sees an aesthetic of ''erasure and reinscription'' (2005: 16) at the heart of not only the spatial practices but also the representation of Zionism.

In the context of the Light Rail description, the Light Rail is thus praised as a mean of modernization and innovation, erasing any kind of conflict and contention from its surface. The notion of Jerusalem as a politically, socially and economically deeply divided and contested city is not introduced into the text. Instead, an ideal vision is displayed that portrays Jerusalem in the hegemonic Jewish-Israeli narrative of a ''*united city*'',[28] ignoring the Palestinian national claims to the city. Further, the labeling of Jerusalem as a ''*metropolis''*[29] can be seen as an attempt to stress the western and ''*modern''* development of Jerusalem under Israeli control, stressing its centrality to Jewish and Israeli life and therefore reinforcing its claim to the entire city. Applying the term ''*metropolis''* to Jerusalem further illustrates how the Israeli authorities try to enforce their vision of the city both through spatial practice as well as in its public discourse, depiction and symbols: Farias and Stemmer have pointed to the fact that the employment of the term metropolis has become a key-concept in city-image-marketing in which the term ''metropolis'' defines a certain way of urban living and lifestyle ''which is not only 'in' or 'hip' but that also has proved to be a source of economic success'' (2012:64). The deliberate use of the term and its employment for marketing reasons associates the term ''metropolis'' with cities as ''labs of modernity'' (Farias and Stemmler, 2012: 49). This success-story of the term is happening against the background that it is also highly biased and loaded with its colonial and imperial connotation (Farias and Stemmler, 2012: 55).

In this context, the metropolis was and is still constituted by a very particular asymmetrical relationship between a center and a periphery (Farias and Stemmler, 2012: 56). ''Metropolis'' thus is a relational concept that does not require, but reproduces itself against another, non-metropolitan periphery. The process of labeling a city a ''metropolis'' can hence be seen as ''concept through which social and political identities are constructed'' (Farias and Stemmler, 2012: 56). By looking at ''metropolis'' as a relational concept that always implies a distinction between a center and a periphery, its productive role not only in creating, but also legitimizing territorial policies as a powerful tool of control over minorities, particularly in deeply divided societies can be scrutinized (Yiftachel, 1995: 220).

The notion of Jerusalem as a ''metropolis'' mostly applies to the area of West Jerusalem. This is evident in the way the textual description of the Light Rail enterprise stresses the importance of the city center and Jaffa Street to Jerusalem. East Jerusalem does not seem to be and is apparently not considered part of the core of Jerusalem – it rather represents its periphery.

Running through history

This poster (Fig. 4) was designed in order to advertise the Jerusalem Marathon 2013. It was placed all over the city in early February 2013 and invited people to join the Marathon under the motto of ‘‘*running through history*”.[30] The graphic that advertises the Marathon includes significant sights of Jerusalem such as the Walls of the Old City, the Montefiore Mill, Jerusalem Chords Bridge (also called the Jerusalem Light Rail Bridge) and a picture of the Jerusalem Light Rail. At the forefront, we see two male runners and one female runner who look like they are running toward the viewer (see Fig. 5). The Marathon itself was first organized in March 2011 on the initiative of Jerusalem’s mayor Nir Barkat. Prompted by his own experience and enthusiasm as marathon runner, the initiative of organizing this event was not taken together with a sports organization, nor was the responsibility shared: instead, it became the sole responsibility of the municipal authorities, through the Jerusalem Municipal Sports Division (Coppieters, 2012: 1563).

Fig. 4 The Jerusalem Marathon poster (picture was taken from: http://1.bp.blogspot.com/-KEatMUpW91k/UT-jkuxmI3I/AAAAAAAAFPU/u0XHFNSAeI0/s640/photo%).

Fig. 5 Beit Hanina station after the clashes (photographer: Hanna Baumann).

The organization of the marathon prompted harsh criticism since its route was planned to pass through East Jerusalem, not paying any attention to the territorial dispute about the city and the claims of Palestinian sovereignty to it (Coppieters, 2012: 1563). Nir Barkat, Jerusalem's mayor from 2011 until today, is known for his nationalist stance on Jerusalem as a united city, favoring and actively supporting Jewish settlement in Jerusalem (Coppieters, 2012: 1563). He subsequently became the biggest advocate of the marathon, the route of which was ''*selected to recount Jerusalem's 3000-year historical narrative since the beginning of its existence.*''[31] This quote already hints to the controversy surrounding the marathon. While it crossed through contested East Jerusalem, only facets of the Jewish history of the city were narrated, only places of Jewish and Israeli past were named and sites of contemporary Jewish Israeli life were marked and explained along the way.[32] The Palestinian population was neither involved in the planning nor in the execution of the Marathon. No Palestinian sites were integrated into the route of the Marathon, no Palestinian presence was mentioned in the official description of the Marathon, addressing runners from all over the world who were invited to join this ''*unforgettable experience"*[33] to see the ''*magnificent views and Jerusalem's unique culture*''.[34]

The poster picks up on the sights selected along the route while also employing the picture of the newly built Light Rail. This was an interesting choice, since the Light Rail as such was not part of the sights chosen for the route, but can rather be understood in its function of pointing to the unique combination of tradition and modernity that is supposedly characteristic of Jerusalem (Barkat, 2014). Such efforts to combine tradition and modernity are also an inherent ideological trait of the Zionist ideology itself (Abu El Haj, 2002). Thus, in its function as being part of the realization of Jerusalem as a modern, European-standard ''*metropolis''*, the Light Rail on the poster is purposely employed to link Jerusalem's past with its present, claiming not only its 3000 years of (Jewish) history, but also an Israeli national ownership that stresses the way the city was developed and modernized after its ''unification'' in 1967.

This connection between past and present, tradition and modernity is by no means coincidental. Rather, by looking at the way history is employed in order to justify both a claim to and

control over the city, it becomes obvious how these claims must also be reflected in the representation of the Marathon, which is itself part of the representation of Jerusalem as a cosmopolitan metropolis.

While marketing the Marathon as an international event and a unique experience along the trail of history, which is provided for in the most modern standards of organization and marketing, the Marathon becomes an important and instrumental tool in representing Jerusalem as a fully modern city. On the poster for the Marathon, this representation furthermore pertains to the woman who is portrayed at the forefront. She is young and white, running smilingly toward the observer. Placing a young woman on the poster is by no means unintended. It goes well together with the above mentioned notion of modernity that the poster is supposed to transport to its audience. Against the background of Jerusalem as a politically, socially and nationally deeply divided city, the Municipality tries to attach to Jerusalem a breeze of normality and unity, linked with a youthful sexiness, that supports the Israeli claim to the entire city. The struggle over the right to and the power over Jerusalem and its correct representation is therefore not only fought through words, but also images. The picture of the woman is one of those powerful images that is employed to not only present the Marathon as a young, dynamic and fresh event but also to point to the inherently modern city that is hosting it.

Thus, by putting a young blond woman at the forefront of the advertisement, her image becomes part of a nationalist discourse (Quayson, 2000: 116), in which women are often employed to prove the progressiveness of a certain society in terms of a formal equality between men and women. This is especially relevant in Israel, where ‘‘gender relations are at the heart of cultural constructions of social identities and collectivities as in most cultural conflicts and contestations’’ (Yuval-Davis, 1997: 39). Through the image, a process takes place that portrays Israel itself as ultimately modern while putting it in distinction to another that is not modern, not progressed and hence backward. This employment of gender roles also pertains to the conflict between Israelis and Palestinians, where the notion of women’s rights, gender equality, and patriarchy is at the heart of the battle. In this context, pointed the alleged ‘‘backwardness’’ of Palestinians is often emphasized, referring for example to the existence of veiled women and the so-called honor-killings. These assumptions are often related to a comparison between the progressive Israeli women (Izraeli, 1994) and the backward (mostly Muslim) Palestinian women who needs to be saved from patriarchy (Yuval-Davis, 1997: 46; Abu-Lughod, 2002: 783). Hence, portraying the woman on the poster at the forefront for the representation of the Marathon conveys an image of modernity that plays a key-role in the way Israel aims to represent itself to its population and the international community (Fenster, 2004).

Conclusion

In this article we discussed the importance of representations of space within the context of a city that is highly contested both politically and culturally. While looking at the implementation of the Light Rail project in Jerusalem, we have pointed to the ways in which it is not only the spatial practice of building the Light Rail in a highly contested colonized territory, but also its representation in public discourse that can be seen as part of a hegemonic practice in order to claim Jerusalem as a unified Jewish city.

As illustrated throughout this article, knowledge production is always closely bound with power, space – and its representation – which are always subject to and object to power-struggles for ideological dominance. Since space is always ‘‘the locus and the medium of Power’’ (Lefebvre, 2012: 94), this power is not only negotiated in, but also through and about space (Legg, 2007: 274). Thus, we clearly indicate throughout this article, the struggle over the appropriate representation of space is especially relevant in contexts of different ideologies that compete in,

through and about space. Those representations subsume power relations that occur in space in the form of buildings, monuments and works of art and they are, in the words of Lefebvre (1991: 39) the ‘‘conceptualized space, the space of scientists, urbanists, technocratic subdividers (. . .) this is the dominant space in any society’’.

Provided with the power to not only occupy and to ‘‘metropolize’’ Jerusalem, but also to represent what is planned, those representations of space entail that the planners ‘‘identify what is lived and what is perceived with what is conceived’’ (Lefebvre, 1991: 38). These perceptions come to shape what people hold true and false, since discourses do not simply reflect an already-existent social reality, but actually enter into the constitution of reality. Hence representations come to play a crucial role in shaping urban identities and self-perceptions (Hubbard, 2008: 74). Based on poststructuralist assumptions and defusing the notion that places and cities have a ‘‘real’’ or ‘‘essential’’ existence outside the realms of language (Hubbard, 2008: 74; King, 1996: 4), the emphasis of this article was not the analysis of an objective urban reality, but rather the analysis of how the perception of a certain urban reality is produced, and therefore the outcome of a powerful and hegemonic discourse, channeled through a wide use of signs, symbols and texts that help to constitute it.

While first looking at the way the Light Rail was planned and developed, ‘‘connecting’’ the western part of Jerusalem with the east of the city, we pointed to the controversial role the Light Rail project came to play within the context of Israeli and Palestinian national claims to the city. It was suggested that infrastructure takes on a crucial role in enforcing a hegemonic Jewish-Israeli narrative over Jerusalem as a ‘‘united city’’, or more accurately a ‘‘united Metropolis’’. Moreover, we argued, it was not only the practice of building itself, but also the way the Light Rail was introduced to the public discourse and socially constructed as a manifestation of modern urbanity, that became part of the struggle to determine the status and claims to the city.

By looking at those representations of through Lefebvrian perspective on social space, it was suggested that they play a crucial part in how people come to see and perceive their city, thus, the control over the representation of space is part of the broader struggle over control in and over the city. Indeed, the production of space requires ‘‘scientific’’ disciplines to contribute to the ‘‘struggle over geography’’. This struggle, as noted by Edward Said, is complex as ‘‘it is not only about soldiers and cannons, but also about ideas, about forms, about images and imaginings’’ (Said, 1994: 6). In this context the contribution of spatial practices such as planning and infrastructure is significant; on one hand they codify within their professional discourse the ideologies they serve, while on the other they transform the built environment, urban form and space. Their power, indeed, is in their ‘‘unquestionable’’ effect of framing daily experience and accumulating meaning, which can be decoded through analyzing the discourses in which they are produced.

The two examples we discussed, taken from actual representations of the Light Rail in public discourse and display, were analyzed in regard to how the Light Rail was placed and labeled by the Jerusalem Municipality and the Ministry of Transportation. It was shown that the Light Rail is presented in the framework of a highly modern, technical infrastructural enterprise that (allegedly) is to the benefit to all the residents of Jerusalem. By representing the project as a neutral, non-political tool of city development, we pointed to the problematic implication of this development discourse, which is also always productive in creating difference and using this difference to stabilize power-relations within an urban context.

By scrutinizing the way the Light Rail – and Jerusalem as the city it ‘‘connects’’ – is portrayed, we have shown that its representation is a part of the hegemonic practice that Israeli authorities employ in its treatment of Jerusalem as a ‘‘united city’’. Against the background of presenting

Jerusalem as a modern ‘‘metropolis’’ in which history, tradition and modernity are closely intertwined, the actual political divide and the different national claims to the city are purposefully ignored. Moreover, the city is presented as young, fresh and hip to attract people to its events, such as the Jerusalem Marathon that plays a crucial role in naturalizing the one-sided Jewish claim of a ‘‘united Jerusalem’’. While the Palestinian presence is erased from the representation of the Light Rail and Jerusalem as a whole, Jewish history and presence are strongly employed in order to stress the Israeli nationalist claim to the city as a national capital.

Endnotes

[16] Route no. 1 is a road that was built along the former Green Line and no-man's land which used to divide Jerusalem.

[17] Connex consists of the two French companies Veolia Environment and Alstom that are in charge of the technical part of the Light Rail project. On the Israeli side, the CityPass-Consortium, comprised of the companies Polar Investments and Harel, that form the financial part of the project. For more information see: http://www.railwaytechnology.com/projects/jerusalem/ (last accessed May 5th 2014).

[19] Throughout this article, all the quotes taken from Transport Master Plan Team webpage will be written in cursive.

[22] Theodor Herzl (1860–1904) was a Jewish Austrian–Hungarian journalist who became famous as the father of modern political Zionism.

[30] All the following quotes and information are taken from the Jerusalem Marathon webpage, direct quotes are again in cursive.

[32] This is especially the case for places and monuments that are of strategic importance for the Zionist project, such as the Menachem Begin Heritage Center, the Israel Museum, the Hebrew University and Ammunition Hill, for a full account of the route, see: http://www.jerusalem.muni.il/jer_sys/marathon11/eng/MarathonInner.asp?BHtml_id=-1&Button_id=0&msg_id=11842&src=http://www.jerusalem.muni.il/jer_sys/publish/chaptersView.asp?pub_id=38401 (Last accessed on June 18th 2014).

[35] Nir Barkat states in his ''Mayor's greetings'' for the forthcoming Jerusalem Marathon 2014 that ''I can personally attest that there is nothing like the Jerusalem Marathon. This is an opportunity to get a direct experience of the city in all its aspects: the various communities, the amazing landscape, the new cultural centers, its fascinating history, the fast-growing development and construction, and the unique touristic sites, all this while breathing the proverbial mountain air- as clear as wine''.

References

Abu-Lughod L (2002) Do Muslim women really need saving? Anthropological reflections on cultural relativism and its others. *American Anthropologist 104*(3): 783–790.

Abu El-Haj N (2002) Facts on the Ground. Archeological Practice and Territorial Self-Fashioning in Israeli Society. Chicago: The University of Chicago Press.

Barghouti O (2009) Derailing injustice. Palestinian civil resistance to the 'Jerusalem Light Rail'. *Jerusalem Quarterly 38*: 46–75.

Cheshin A, Hutman B, and Melamed A (1999) *Separate and unequal: The inside story of Israeli Rule in East Jerusalem*. Harvard: Harvard University Press.

Chiodelli F (2012a) Planning illegality: The roots of unauthorised housing in Arab East Jerusalem. *Cities 29*(2): 99–106.

Chiodelli F (2012b) The Jerusalem Master Plan. Planning into conflict. *Jerusalem Quarterly*. *51*: 5–20.

Chiodelli F (2013) Re-shaping Jerusalem: The transformation of Jerusalem's metropolitan area by the Israeli barrier. *Cities 31*: 417–424.

Coppieters B (2012). The organisation of Marathons in divided cities: Brussels, Belfast, Beirut and Jerusalem. *The International Journal of the History of Sport 29*(11): 1553–1576.

Farias I and Stemmler S (2012) Deconstructing ''Metropolis''. Critical reflections on a European concept. In Brantz D, Disko S, and Wagner-Kyora G (eds.), *Thick space. Approaches to metropolitanism*. Bielefeld, Piscataway, NJ: Transcript; [distributor] Transaction Publishers (Urban studies), 31-48.

Fenster T (2004) *The global and the holy city*. Pearson: Prentice Hall.

Fields G (2010) Landscaping Palestine: Reflections of enclosure in a historical mirror. *International Journal of Middle East Studies 42*(01): 63-82.

Finnegan R (1998) *Tales of the city – A study of narrative and urban life*. Cambridge: Cambridge University Press.

Forman G and Kedar A (2004) From Arab land to 'Israel Lands': The legal dispossession of the Palestinians displaced by Israel in the wake of 1948. *Environment and Planning D 22*(6): 809–830.

Haaretz (2013) French Court: Jerusalem Rail Does Not Violate International Law. 13 April. Available at: https://www.haaretz.com/2013-04-28/ty-article/french-court-jerusalem-light-rail-project-legal/0000017f-da80-dea8-a77f-dee2340a0000. (accessed 19 October 2023).

Hastings A (1999) Discourse and urban change: Introduction to the special issue. *Urban Studies 36*(1): 7–12.

Höhne S (2012) An endless flow of machines to serve the city. Infrastructural assemblages and the quest for the metropolis. In Brantz D, Disko S, & Wagner-Kyora G. (eds.) *Thick space. Approaches to metropolitanism*. Bielefeld, Piscataway, NJ: Transcript; [distributor] Transaction Publishers (Urban studies).

Hubbard P (2008) *City*. London: Routledge.

Izraeli D (1994) On the status of the woman in Israel: Women in the military. *International Problems: Society and State 33*: 21–26.

Jabareen Y (2010) The politics of state planning in achieving geopolitical ends: The case of the recent master plan for Jerusalem. *International Development Planning Review 32*(1): 27–43.

Jefferis DC (2012) The ''center of life'' policy. Institutionalizing Statelessness in East-Jerusalem. *Jerusalem Quarterly 50*: 94–103.

Jerusalem City Pass (n.d.) Available at: http://www.citypass.co.il/english/ContentPage.aspx?ID=2. (accessed 19 October 2023).

Jerusalem City Pass (n.d.) Available at: http://www.citypass.co.il/english/ContentPage.aspx?ID=16. (accessed 19 October 2023).

Jerusalem Municipality (n.d.) Jerusalem Marathon. Available at: http://www.jerusalem.muni.il/jer_sys/marathon11/eng/marathonInner.asp?BHtml_id=&Button_id=9449&src=http://www.jerusalem.muni.il/jer_sys/publish/showPublishEng.asp?pub_id=38400+father_id=36674+lang=2. (accessed 18 June 2014).

Jerusalem Municipality (n.d.) Jerusalem Marathon. Available at: http://www.jerusalem.muni.il/jer_sys/marathon11/eng/marathonInner.asp?BHtml_id=&Button_id=9449&src=http://www.jerusalem.muni.il/jer_sys/publish/showPublishEng.asp?pub_id=38400+father_id=36674+lang=2 . (accessed 18 June 2014).
Jerusalem Municipality (n.d.) Jerusalem Marathon. Available at: http://www.jerusalem.muni.il/jer_sys/marathon11/eng/MarathonInner.asp?BHtml_id=-1&Button_id=0&msg_id=11842&src=http://www.jerusalem.muni.il/jer_sys/publish/chaptersView.asp?pub_id=38401 . (accessed 18 June 2014).
Jerusalem Municipality (n.d.) Jerusalem Marathon. Available at: http://www.jerusalem.muni.il/jer_sys/marathon11/eng/marathonInner.asp?BHtml_id=&Button_id=9449&src=http://www.jerusalem.muni.il/jer_sys/publish/showPublishEng.asp?pub_id=38400+father_id=36674+lang=2. (accessed 18 June 2014).
Kerschner I (2007) Jerusalem light rail raises questions about the divided city. *New York* Times. 6 June. Available at: https://www.nytimes.com/2007/06/05/world/africa/05ihtdig.1.6003093.html?_r=1&. (accessed 19 October 2023).
King AD (1996) *Re-presenting the city. Ethnicity, capital, and culture in the 21stcentury metropolis*. New York: New York University Press.
Klein M (2005) Old and new walls in Jerusalem. *Political Geography 24*(1): 53–76.
Lefebvre H (1991) *The production of space*. Oxford, OX, UK, Cambridge, Mass., USA: Blackwell.
Legg S (2007) Beyond the European province. Foucault and postcolonialism. In: Crampton J & Elden S (eds.) *Space, knowledge and power. Foucault and geography.* Aldershot, England, Burlington, VT: Ashgate, 265–291.
LeVine M (2005) *Overthrowing geography. Jaffa, Tel Aviv, and the struggle for Palestine, 1880–1948*. Berkeley: University of California Press.
Lustick S (2004). Yerushalayim, al-Quds and the Wizard of Oz: Facing the problem of Jerusalem after Camp David II and the al-Aqsa Intifada. *The Journal of Israeli History 23*(2): 200–215.
Mahler GS (2010) *Politics and government in Israel. The maturation of a modern state*. Lanham, MD: Rowman & Littlefield; [distributor] NBN International Ltd.
Mazza L (2009) Centenary paper: Plan and constitution – Aristotle's Hippodamus: Towards an 'ostensive' definition of spatial planning. *Town Planning Review 80*(2): 113–141.
Pullan W, Misselwitz P, Nasrallah & Yacobi H (2007) Jerusalem's road 1. *City 11*(2): 176–198.
Pullan W (2013) Spatial discontinuities: Conflict infrastructures in contested cities. In Pullan W & Baillie B (eds.) *Locating urban conflicts: Ethnicity, nationalism and the everyday*. London: Palgrave Macmillan.
Quayson A (2000) *Postcolonialism. Theory, practice, or process?* Cambridge, UK, Malden, MA: Polity Press: Blackwell Publishers.
Railway Technology (n.d.) Jerusalem Project. Available at: http://www.railwaytechnology.com/projects/jerusalem/. (accessed 19 May 2014).
Rapoport M (2006) Dutch Bank Divests Holdings in J'lem Light Rail, Cites Settlements. *Haaretz*, 3 December. Available at: https://www.haaretz.com/2006-12-03/ty-article/dutch-bank-divests-holdings-in-jlem-light-rail-cites-settlements/0000017f-db09-d4e1-a57f-fbcdc4f10000. (accessed 19 October 2023).
Rokem J (2012) Politics and conflict in a contested city. Urban planning in Jerusalem under Israeli rule. *Bulletin du centre de recherche à Jerusalem 23*: 1–12.
Safier Ml (2001) The struggle for Jerusalem: Arena of nationalist conflict or crucible of cosmopolitan co-existence? *City 5*(2): 135–168.
Said EW (1994) *Culture and imperialism*. New York: Knopf.
Scollon R (1998) *Mediated discourse*. New York: Addison Wesley Longman.
Shlay AB and Rosen G (2010) Making place: The shifting green line and the development of ''Greater'' metropolitan Jerusalem. *City & Community 9*(4): 358–389.
Thawaba S and Al-Rimmawi, H (2012) Spatial transformation of Jerusalem: 1967 to present. *Journal of Planning History 00*(0): 1–15.
Transport Master Plan Team (n.d.) Jerusalem Light Rail. Available at: http://jet.gov.il/Web/En/About/LookingAhead/Default.aspx (accessed 19 June 2014).

Transport Master Plan Team (n.d.) Jerusalem Light Rail. Available at: http://jet.gov.il/Web/En/About/LookingAhead/Default.aspx. (accessed 18 June 2014).
Transport Master Plan Team (n.d.) Jerusalem Light Rail. Available at: http://jet.gov.il/Web/En/About/LookingAhead/Default.aspx. (accessed 7 May 2014).
Transport Master Plan Team (n.d.) Jerusalem Light Rail. Available at: http://jet.gov.il/Web/En/About/LookingAhead/Default.aspx. (accessed 7 May 2014).
Transport Master Plan Team (n.d.) Jerusalem Light Rail. Available at: http://jet.gov.il/Web/En/About/LookingAhead/Default.aspx. (accessed 7 May 2014).
Transport Master Plan Team (n.d.) Jerusalem Light Rail. Available at: http://jet.gov.il/Web/En/About/LookingAhead/Default.aspx. (accessed 7 May 2014).
Transport Master Plan Team (n.d.) Jerusalem Light Rail. Available at: http://jet.gov.il/Web/En/About/LookingAhead/Default.aspx. (accessed 18 June 2014).
United Nations (1980) *Security Council Resolution 478*. *On the Status of Jerusalem,* New York. Available at: http://unispal.un.org/UNISPAL.NSF/0/DDE590C6FF232007852560DF0065FDDB. (accessed 28 April 2014).
Yacobi H (2004) *Constructing a sense of place. Architecture and the Zionist discourse*. Ashgate: Aldershot, Hants, England, Burlington, VT
Yacobi H (2012) Borders, boundaries and frontiers. Notes on Jerusalem's present geopolitics. *Eurasia Border Review*: 55–69.
Yiftachel O (1998) Planning and social control: Exploring the dark side. *Journal of Planning Literature 12*(4): 395–406.
Yiftachel O (1995) The dark side of modernism. Planning as control of an ethnic minority. In Watson S and Gibson K (eds.) *Postmodern cities and spaces.* Oxford, UK, Cambridge, Mass: Blackwell.
Young D and Keil R (2010) Reconnecting the disconnected: The politics of infrastructure in the in-between city. *Cities 27*(2): 87–95.
Yuval-Davis N (1997) *Gender&Nation*. London/Thousand Oaks/New Dehli: Sage Publications.

B Political Infrastructure and Politics of Infrastructure

Author: Amina Nolte

Published in: *City. Analysis of Urban Change, Theory, Action* 20 (2016), 3, p. 441-454.
DOI: https://doi.org/10.1080/13604813.2016.1169778

Abstract

Against the background of a highly conflictive urban situation, the paper focuses on the planning and implementation of the Jerusalem Light Rail (JLR). Running from the west all the way to the east of the city, the JLR traverses and connects contested territory. While Palestinians and the international community consider East Jerusalem to be part of a future Palestinian state, Israel adheres to its claim to the whole city, a unified Jerusalem. It is to that end that the JLR was implemented and, as this paper argues, it can be seen as an important governance tool that not only serves the city's citizens and residents alike, but also works towards consolidating the Israeli authorities' claim to the whole city. Further, the paper discusses whether infrastructure is inherently political or if there is a 'politics of infrastructure' at stake in Jerusalem with regards to the JLR and its wider implications for the urban fabric. The paper suggests that much can be learned from major transport infrastructure in cities, not only for contested cities such as Jerusalem, but also ordinary cities, since infrastructure is always already part of the existing and emerging political power struggles in every city.

Keywords: urban infrastructure, politics, conflict, Jerusalem

Introduction

> *'I believe that this [Jerusalem Light Rail] should be done, and in any event, anything that can be done to strengthen Jerusalem, construct it, expand it and sustain it for eternity as the capital of the Jewish people and the united capital of the State of Israel, should be done'* (Ariel Sharon, as cited in Civic Coalition, 2009: 7).

The Jerusalem Light Rail (hereafter JLR) and the effect it has on the urban fabric of the city of Jerusalem is politically relevant. After a few seemingly 'normal' years after its launch in 2011, the JLR is now repeatedly all over the news, not only in Israel, but also in Europe (Sherwood, 2014) and the USA (Booth and Eglash, 2014). Running from West to North-East Jerusalem, the JLR has changed Jerusalem's cityscape tremendously. Presented as a means of increased public mobility in a congested city, the JLR has attracted criticism since its inception. Some saw it as a prestige project of the Jerusalem Municipality, wasting millions that could have been invested in existing infrastructure. Others voiced concerns that the JLR would be an easy target for Palestinian terror attacks. Palestinians and others for their part condemn the JLR as yet another element of Israel's forceful annexation of East Jerusalem. Against this, authorities behind the JLR were eager to portray it as an efficient and modern transportation facility, praiseworthy even for its promotion of coexistence between Jerusalem's different communities (Pfeffer, 2012). Initially, the JLR was in fact well received and frequently used by Israeli citizens, Palestinian residents and international tourists alike. The existing segregation in the city seemed to take a back seat in light of the shared need for mobility (Figure 6).

Fig. 6 Jerusalem Light Rail (Photo: Amina Nolte).

This changed in summer 2014, when violent protests broke out in Jerusalem due to the kidnapping and murder of the 16-year-old Palestinian Muhammad Khdeir by right-wing Israeli youth. Palestinians took to the streets and protested against the violent murder. In doing so, much of their anger was targeted at the JLR stops in East Jerusalem: ticket machines were dismantled, tracks set on fire and stones thrown on the train itself (Hasson, 2014). Events worsened later on in October and November amidst clashes on the Temple Mount or Haram al-Sharif. In November, the JLR was targeted by so-called hit and run attacks, in which two Palestinians from Jerusalem attacked passengers at the stations with their cars, killing four people (Sales, 2014). Another hit and run attack close to the JLR tracks happened on 6 March 2015, in which seven Israelis were wounded and the Palestinian assailant killed (Yanovski, 2015). The most recent events in autumn 2015, labeled by some a 'Third Intifada', in which violence escalated in and around Jerusalem, has brought many more attacks to the area of the Light Rail tracks. In the wake of the violence, many stopped using the JLR, voicing fear and concern of future attacks. The Municipality has announced that the stops in Shuafat in East Jerusalem are to be monitored by surveillance balloons in order to prevent Palestinian attacks on the JLR (Eisenbud, 2014).

It is against this background that the JLR has to be seen and studied in Jerusalem. Rather than being a simple means of mass transit infrastructure, the JLR needs to be contextualized with regards to its wider implications for the city of Jerusalem. Hence, in this paper I put forward an argument that stresses the importance of a critical discussion on infrastructure such as the JLR, not only in cities that are as conflicted and segregated as Jerusalem, but also cities that defy these labels at first glance. Importantly however, I do not seek to study Jerusalem as a 'contested' city as opposed to ordinary cities. Rather, and I follow Oren Yiftachel in his well-argued commentary in this issue, I consider Jerusalem as 'neither a model city, nor as an exception, but rather as a hyper concentration of forces, events and movements to be found in most urban regions in various combinations and assemblages'. Or, as Jonathan Rokem

concludes in the introductory paper to this special feature, Jerusalem, '[r]ather than being extreme [. . .] is the harbinger of things to come'.

As such, Jerusalem is here singled out as an example to illustrate how politics and 'the political' are always inherent to infrastructure, as an assemblage of 'simultaneous forces, movements, agents and politics that co-produce the nature of contemporary urbanism' (Yiftachel, 2016). The planning and implementation of the JLR, I argue, has to be critically studied against the background of its controversial routing, naming of stations and the regime of security that has been created around it. The way the JLR was planned, implemented and also represented in Israeli discourse makes it subject to a number of contentious acts that target the hegemonic imposition of the Israeli claim over all Jerusalem (Nolte and Yacobi, 2015).

The contentiousness of the JLR, I argue, is premised on 'political infrastructures' (McFarlane and Rutherford, 2008) and the 'politics of infrastructure' (Young and Keil, 2010). The role of infrastructure around the construction of the city and the production of urban space has, in recent years, become more pronounced within the wider debate on urban planning (Graham and Marvin, 2001; Graham, 2009). Yet, while arguing for the consideration of a 'politics' of infrastructure, in which infrastructure turns into a tool of governance and control (McFarlane and Rutherford, 2008), less attention has been paid to infrastructure as a site of 'the political' itself. The political, however, as I argue here, becomes evident in how the JLR is planned, negotiated and resisted: The 'political' plays out in several forms of agency that have been made visible again through moments of rare encounter on the Light Rail. This corresponding negotiation and contestation demarcates the JLR as a site of struggle. The city and hence the JLR as one of its many microcosms, is a 'difference machine [. . .] a configuration that is constituted by the dialogical encounter of groups formed and generated immanently in the process of taking up positions, orienting themselves for and against each other' (Isin, 2002: 49). It is, according to Isin (2002: 30–35), where the 'political' plays out as a struggle over ownership, domination, belonging and representation. By taking Isin's argument on the city as a 'difference machine' a bit further and to the specific context of Jerusalem, I suggest that infrastructure can also be regarded as the site of the 'political' itself. It is here that notions of access, representation, inclusion and exclusion play out and are negotiated, especially with regards to the newly built JLR system.

By discussing the JLR against the background of the 'politics of infrastructure' and as a site of 'the political' itself, this paper sets out to discern important features of cities in conflict, shedding light on how urban infrastructure adds to political contestation and how identifications are thereby simultaneously manifested and questioned. As such, Jerusalem serves here as an extreme example of the often racialized and hegemonic political urban regimes that govern cities. However, without neglecting the dominant forces that are at work in Jerusalem, the paper probes the agency of its inhabitants—citizens and non-citizens alike. As such, the paper recognizes the Israeli hegemony imposed on the city, but leaves space for the 'imminent possibility that the nature of engagement between these forces may change' (Yiftachel, 2016). With regards to what is at stake here, much can be learned from infrastructure in Jerusalem and the JLR, for better or worse.

Connecting Jerusalem—infrastructure in a segregated city

Jerusalem is the object of the competing national aspirations of Israelis and Palestinians and to the religious claims of the three monotheistic religions of Judaism, Christianity and Islam. In the wake of the hostilities between Israel and its Arab neighbors in the 1940s, the international community attempted to give Jerusalem the status of an international city in 1947. Those attempts failed due to the ongoing Arab–Jewish clashes and the outbreak of the 1948 war after

Israel's declaration of independence (Shlay and Rosen, 2010). Jerusalem was divided between Israel (western part) and Jordan (eastern part) (Thawaba and al-Rimmawi 2013, Rokem 2013). The armistice line was called the 'Green Line' in the Rhodes agreement of 1949 (Shlay and Rosen, 2010). In the 1967 war between Israel and its Arab neighbors, Israel captured and occupied East Jerusalem and 'adopted a multifaceted strategic plan to expand and control Jerusalem, and with amendments to existing legislation and administrative orders, applied its law to an area three times the size of prewar Jerusalem. The state executed an "occupation through municipal expansion" (Lustick, 2004: 202), vowing that Jerusalem will "never be divided again".' (Shlay and Rosen, 2010: 366).

While the international community has never recognized Israel's claim to the eastern part of Jerusalem, rejected it in the United Nations (UN) Security Council Resolution number 478 in 1980, and declared it a violation of international law, the Israeli authorities set out to strengthen the physical and discursive control over the whole city, 'the aim being to create "urban facts" which would make any future division of the city practically impossible' (Chiodelli, 2012: 6). Despite it being claimed by the Palestinian population as their political, cultural and religious capital, Israel annexed the eastern part of Jerusalem and manifested this claim as part of the Israeli basic law. This made the eastern and hence Palestinian part of the city legally an inseparable part of Jewish-Israeli Jerusalem under the administration of the Greater Jerusalem Municipality (Klein, 2005). In claiming the land as part of 'united Jerusalem, a fixed urban space, a given subject of Israeli sovereignty and ethno-national aspirations' (Yacobi, 2012: 55), the Jerusalem Municipality embraced the expansion of territory while constantly working towards containing the expansion of its Arab population through means of planning and the restructuring of the city (Chiodelli, 2012: 7). This process hegemonically created the Jerusalem metropolis as a geopolitical entity, orchestrated by Israel.

This is especially obvious in the way the Palestinian population of East Jerusalem was treated after its supposed reunification: while the territory of East Jerusalem became officially part of 'unified' Jerusalem, most of its Palestinian inhabitants, despite being born in the city, are neither citizens of the State of Israel, nor part of the alleged selfunderstanding of Jerusalem as a Jewish city (Chiodelli, 2013: 417). Since Israel's illegal annexation of East Jerusalem in 1967, 'most Palestinian Jerusalemites are "permanent residents" under Israeli law, permitted to exercise a limited set of rights: they may live and work in Israel, travel to and from the West Bank, collect some social benefits and vote in municipal elections' (Jefferis, 2012: 95). Yet, as residents, they can lose their residency status at any time if they are not able to prove that Jerusalem is the 'center of their life'. While claiming that Jerusalem is an 'open city' that is a place of harmony where Jews, Muslims and Christians could live peacefully side by side under Israeli sovereignty, the Israeli authorities also consider it to be their national capital, and in turn discredit any other national claims to Jerusalem (Klein 2005, 54). While doing so, the Jerusalem Municipality, which is based in West Jerusalem and governs the whole city, is constantly working towards the Judaization of the city, that is, the promotion of both Jewish urban and demographic expansion in the eastern part of the city, and de-Palestinization, that is, the containment of Arab expansion of Jerusalem (Safier, 2001; Chiodelli, 2012, 2013; Pullan, 2013).

In 2004, Israeli authorities launched a Master Plan that outlined the idea and development of a unified metropolitan Jerusalem until the year 2020. The plan aims at retaining a demographic balance of 60% Jewish to 40% Palestinian population (Jabareen, 2010; Chiodelli, 2012; Rokem, 2013). Many authors have pointed to the political and ethno-national bias underlying the objectives of the Jerusalem Master Plan as the Jewish population is favored over the Arab-Palestinian population (Yiftachel, 1998; Chiodelli, 2012, 2013; Rokem, 2013). This pertains to a constant segregation and fragmentation of the Palestinian neighborhoods, making it 'a mosaic of enclaves within enclaves resulting in a non-homogenous urban fabric' (Thawaba and al-Rimmawi, 2013: 70). Moreover, there are fewmeans of public transportation that link these

neighborhoods with each other, let alone with western Jerusalem (Klein, 2005; Thawaba and al-Rimmawi, 2013). Meanwhile, Israeli settlements are characterized by an almost complete territorial continuity and therefore blurring the boundary between west and east of the Green Line. Those facts also attributed 'a sense of normality to the settlements, which suggests that they are not at the frontier, but a natural expansion of suburbia' (Pullan et al., 2007: 182).

Politics of infrastructure—planning and implementing the JLR

Notions of planning as a political tool of states, municipalities, urban planners and architects are not new to the academic field. Henri Lefebvre has pointed to the inherently political implication of planning and mapping the city since 'the plan does not rest innocently on paper—on the ground it is the bulldozer that realizes the "plans"' (Lefebvre, as cited in Elden, 2004: 189). Planning is, according to Lefebvre (1991), always shaped by the hegemonic order from which it evolves and thus never independent from it. For Lefebvre, the city as a certain spatial configuration is the locus and outcome of power relations. Here the struggle for physical, territorial and symbolic hegemony plays out through ways of planning and controlling the city. And sometimes planning the city is already part of controlling it. In his important contribution,Oren Yiftachel has described the ethno-national bias that underlies planning. He discussed the 'dark side of planning' as 'states become complicit in favoring one group over the other' (Yiftachel, 1998: 400), which is always reflected in the planning and social engineering of the city. He sees planning as a tool through which the nation-state produces and reproduces its own national space by means of segregation and the containment of ethnic minorities. By equally emphasizing the association between social and spatial control, Mazza (2009) has added some valuable insights to the debate. He highlights the role of authorities in promoting their own ideological principles through acts of planning and to legitimate national ideological choices. From his perspective, 'planning is not only the art of building cities, it is an instrument of governance' (Mazza, 2009: 114) that exerts spatial and thus social control by means of distinction of inclusion and exclusion. The power of distinguishing between spatial inclusion and exclusion is manifest in 'space-related practices' (Höhne, 2012: 148). It not only assumes a landscape that is subject to and shaped by power relations (Fields, 2010) and the power to plan and design the built environment, but is also its ultimate representation. Planning and implementing urban infrastructures is hence at the heart of the power struggle in the city. They 'can be at the core of transformations in wider territorial governance' (McFarlane and Rutherford, 2008: 365). Infrastructure is planned and implemented, it is not just 'out there', although its existence is often only rendered visible upon breakdown (Star, 1999: 382).

Planning and implementing infrastructure happens against the background of certain political agendas, programs and ideologies. It is 'a physical fabric above and below ground, being produced, altered, repaired, maintained and demolished by a host of builders, developers, architects, engineers, bulldozers and diggers' (McFarlane and Rutherford, 2008: 366). Infrastructure, one can therefore note, is materialized governance in a sense that it has the power to include and exclude, to territorialize and to de-territorialize (Höhne, 2012). Governing infrastructure is a powerful means of controlling and 'disciplining' corporeal subjects (McFarlane and Rutherford, 2008: 366)— being in control of planning and implementation can therefore be seen 'as politics pursued by other means' (Latour, as cited in in McFarlane and Rutherford, 2008: 370). The power to connect and disconnect, to territorialize and de-territorialize is hence a powerful tool to shape the city. Infrastructures that are built to connect thereby actually disconnect those non-central spaces that lie in between. This in-between-ness as a pertinent situation for many city inhabitants is politically produced. It is the outcome of planning, informed by national and ideological biases. Oren Yiftachel (2009b) labeled this condition 'gray space', which contains 'a multitude of groups, bodies, housing, lands, economies and discourses, lying

literally “in the shadow” of the formal, planned city, polity and economy’ (89). He has discussed the effects of these ‘gray spaces’ and their ‘invisible population’ with the example of Israeli politics towards Bedouins in Israel, and pointed to the inherently political situation of the marginalized as ‘important actors in shaping cities and regions’ (Yiftachel, 2009a: 243). These processes of place-making, in which a certain condition of access or mobility is improved at the expense of others, is an obvious phenomenon of ‘centralized rail-based transportation infrastructure’ (Young and Keil, 2010: 90). The JLR is thus a good example for the underlying ethnonational biases of planning and implementing infrastructure. In addition to the extended network of highways, roads and bypassroads that not only connect West Jerusalem to the Jewish settlements in East Jerusalem, but also to the contested Jewish settlements in the West Bank (all of which are illegal under international law), the Israeli government approved the establishment of the JLR project in 1999 (Shlay and Rosen, 2010; Thawaba and al-Rimmawi, 2013). Following basically the same path as Route no. 1 towards the east, the JLR connects the western side of Jerusalem with the Jewish neighborhoods in North-East Jerusalem (Barghouti, 2009; Thawaba and al-Rimmawi, 2013). As a part of the Master Plan for Jerusalem that aimed to hinder Palestinian growth in Jerusalem while expanding Jewish presence and domination throughout the city (Chiodelli, 2012, 2013; Yacobi, 2012), the JLR was the ‘brainchild of the Jerusalem Transportation Master Plan, jointly administered by the Ministry of Transport and the Jerusalem Municipality’ (Barghouti, 2009). Twelve out of 23 stops of the JLR are built in East Jerusalem, thereby fostering the physical and territorial annexation of the city to Israel. While the JLR stops at three stations in Palestinian neighborhoods of East Jerusalem (namely, al-Sahl, Shuafat, Beit Hanina), it serves as a connecting tool between West Jerusalem and the Jewish-Israeli settlements in East Jerusalem. In this sense, planning has been adapted to the needs of Jewish-Israeli citizens who live in contested settlements on Palestinian territory, facilitating an easy and quick mobility between the city center of Jerusalem and its ‘satellite-communities’, as the settlements are called in Israeli discourse. Any Palestinian claim to East Jerusalem is thereby foreclosed, not only discursively, but also territorially. For many Palestinians and Human Rights Organizations, the JLR will therefore ‘fast diminish any chances of East Jerusalem becoming the future capital of a Palestine State’ (Civic Coalition for Jerusalem, 2009: 11). The planning and routing of the JLR thus clearly indicates it as the Israeli authorities’ tool to strengthen their physical grip on the city. Vested with the political power to not only plan, but also implement it against any national and international critique, the JLR project is a clear statement of the Israeli government’s attempt to unilaterally work towards a territorial ‘unification’ of Jerusalem (Shlay and Rosen, 2010: 374). Erasing any notion of the ‘Green Line’, the JLR was hence turned into a symbol of ‘unity’ between East and West Jerusalem, providing speed and mobility to Israeli citizens. Thus, the JLR perpetuates at once a process of territorialization between West and East Jerusalem, and at the same time a clear deterritorialization of the Palestinian areas of Jerusalem is undertaken. This is also reflected in the security fence/wall that cuts Palestinian Jerusalem from the West Bank and so clearly obstructs mobility for Palestinians through planned and implemented fragmentation (Pullan, 2013).

In its discursive representation, the JLR is officially serving the Israeli citizens and Palestinian residents of Jerusalem alike. On the ground however, Palestinian presence on and around the JLR has evoked a heated debate. Much controversy evolved around including three stops in Palestinian parts of the city to the JLR network. The presence of Palestinians on the JLR was from the beginning tolerated rather than desired by Israeli authorities (Sherwood, 2014). The Citypass Consortium which is responsible for the implementation of the JLR made headlines in 2010 by distributing questionnaires to residents: among practical questions regarding the intention to ride the JLR, the route etc., the questionnaire entailed two particularly telling questions: ‘The light rail includes three stations in Shoafat. Does that present a problem for you?’;

and in another question: ‘All passengers, Jewish and Arab, enter the train freely and without the driver’s inspection. Is that a problem for you?’ (Hasson, 2010).

Here, the implementation of the JLR is obviously linked to a new political geography of ethnocratic cities (Yiftachel, 1998). It describes a bias that underlies the planning process and differentiates between certain populations: Jewish citizens of the city are openly asked whether Arab (Palestinian) presence on the JLR would pose a problem for them. Since Arabs would enter the JLR unchecked, a clear connection between Arabs and terrorism is evoked in the question. The questionnaire attracted much criticism and was also condemned by Israeli Municipality officials (Hasson, 2010). However, it points to the underlying planning bias, in which the JLR was mainly thought to serve Jewish-Israeli mobility and continuity in the city while putting up with Palestinian presence on the train rather reluctantly. Here is at stake what Yiftachel (2009a: 246) has called the ‘continuous remaking of identities through contentious politics’: Palestinians are singled out and discursively presented as a potential danger to Jewish-Israeli citizens. Hence their presence on the JLR will also come to be perceived that way, as will be discussed below. These ‘politics of infrastructure’, that are based on the assumption and construction of difference, are active in the material realization of ‘peripheral, weakened and marginalized spaces’ (Yiftachel, 2009a: 243). These actively created ‘gray spaces’, initiated as a means of urban control in the name of security, will be ‘undermined by this very process’ (Yiftachel, 2009a: 242) through acts of contestation.

The politics of naming—narrating the nation

The ‘politics of infrastructure’ were also clearly at stake on a representational and symbolic level. According to Lefebvre, this is always actively intertwined with the level of its implementation (Nolte and Yacobi, 2015). Representing the JLR to a broad public was hence at the core of its implementation process, of which naming the stops was an important governance tool. According to Isin (2002), naming is symbolic power ‘to make something exist in the objectified, public, or formal state [. . .] the power of naming usually comes with the power of representing’ (28–29). Naming is a deeply political and ideological endeavor in every nationalist context because whoever does the naming holds the key for defining a certain space according to his/her interests and needs. They help ‘create a certain historical narrative, generating a sense of permanence so that the past, as portrayed by the state, becomes the accepted history and heritage’ (Shoval, 2013: 612). Many scholars have pointed to how naming streets, for example, is part of the ongoing process of mapping the boundaries of the nation (Azaryahu and Kook, 2002). The power of politics to name is thus a ‘powerful vehicle for promoting identification with the past and locating oneself within wider networks of memory’ (Aldermann, 2008: 195). In Israel and especially in the contested city of Jerusalem, naming is inherently political—and so was the process of assigning names to the JLR stops. Israel’s most prominent linguist Avshalom Kor proposed to give names to the stops that endow Israel’s legacy in Jerusalem (Hasson, 2009). The Hebrew newspaper Haaretz quoted his report in which he states that any attempt to give the stops Arabic names in East Jerusalem would not only eradicate the Hebrew past of the city, but also acknowledge ‘the illegal (Palestinian) construction’ in East Jerusalem (Hasson, 2009; own translation from Hebrew). Kor proposed Hebrew names for all the stops of the JLR that emphasized the biblical, historical and military history of Israel. Some of his proposals, names such as ‘Davidka’ (an Israeli mortar that was used in the 1948 war of independence) and ‘Bikur Holim’ (literally translated: ‘Visiting the sick’) for the stop on the famous Jaffa street that traverses the western center of the city were accepted and subsequently implemented by the committee appointed by the mayor of Jerusalem, Nir Barakat. Out of 12 stops in East Jerusalem, three were given Arabic instead of Hebrew names. The Arabic names were officially chosen according to the name of the respective neighborhood, although all the stops are

actually part of the encompassing Palestinian neighborhood of Shuafat. The nine other stops, all located beyond the Green Line, were given Hebrew names. Interestingly, there is a variation between the Hebrew, Arabic and English names. For example, the famous Damascus Gate, which is the core of Palestinian life in East Jerusalem and one of the central tourist entries to the Old City, is called 'Shaar Shchem' in Hebrew according to the first capital of Samaria (biblical times). The English name is 'Damascus Gate'. In Arabic, the stop is called 'Bab Al- Amud' as the area is known to Palestinians. Moreover, the stop next to the Palestinian neighborhood of Sheikh Jarrah was named 'Shimon HaZadik' after the biblical story of 'Simon the Just'. Interestingly, the next stop in the Hebrew version is named 'Ammunition Hill' (Giv'at Ha-Tichmoschet) and 'Sheik Jarrah' in Arabic. While the stops in Shuafat are translated from Arabic to Hebrew, the stops in Arabic indicate the actual location in Shuafat such as 'South Shuafat' (in Hebrew: al-Sahl), 'Central Shuafat' (in Hebrew: Shuafat) and 'North Shuafat' (in Hebrew: Beit Hanina). Thus, the Hebrew version indicates that the train stops in three different neighborhoods, while it actually has three stops in one neighborhood. In fact, 'Beit Hanina', another large Palestinian neighborhood located north of Shuafat, does not even have a stop, although the Hebrew name of the station suggests so. This might be because Beit Hanina is geographically located next to Pisgat Ze'ev, a Jewish-Israeli settlement, where the JLR tracks terminate. Beit Hanina as a major Palestinian neighborhood in East Jerusalem is thus disconnected from the mobility that the JLR provides, even though the naming of the adjacent stop in Hebrew suggests otherwise. It is a 'gray space' that is not only disconnected from mobility, but also from basic services, such as access to basic education, waste disposal and security.

Hence naming in this case was obviously a matter of politics. Different names were assigned to the same stops for different addressees. While the Hebrew names in East Jerusalem clearly link the stops to a wider narrative of biblical and historical sites only indirectly or not at all connected to the location of the stop, the Arabic names (or some of them) were chosen according to the actual location. No Arabic/Palestinian historical or other traditional names were given. Sensitive names such as 'Damascus Gate' and 'Ammunition Hill' were assigned different names that carry different meanings and stipulate distinct imaginations. Clearly, the planners of the JLR must have been aware of the sensitive issue of naming in the context of East Jerusalem. But no Palestinian residents able to suggest their own names were involved in the naming process. Naming and assigning the names was thus done from a hegemonic Israeli position and reinforced the Israeli territorial dominance in East Jerusalem on a representational and symbolic level. The 'politics of infrastructure' hence not only creates facts on the ground through planning and building, but are also plaited into a wider narrative of the city, its history and legacy, as the process of naming the stops of the JLR has revealed.

Political infrastructure

The politics of infrastructure are at stake in the process of planning, implementation and representation of the JLR. From the vantage point of the Israeli authorities, they are employed to provide legitimation to the connecting of West and East Jerusalem. While aiming at territorially uniting Jerusalem to emphasize the Jewish-Israeli claim over the whole city, the JLR does enhance mobility for Israeli citizens and Palestinian residents alike. But, as has been pointed out above, in relative and differential ways for the two populations. On the other hand, it also deepens the already existing political, social and economic gap between Jewish-Israeli residents (in Jewish neighborhoods/settlements in West and East Jerusalem, respectively) and the Palestinian residents (in Palestinian neighborhoods in East Jerusalem). Israeli officials claimed that the JLR would serve all its residents equally by connecting the growing modern metropolis, relieve traffic congestion, provide public transportation and support efforts to renew

the city's declining center (Shlay and Rosen, 2010). Contrary to this claim, however, Palestinian and international non-governmental organizations (NGOs) posit that the JLR is yet another step in the colonial occupation of East Jerusalem (Barghouti, 2009). A legal case was filed against the French companies Veolia and Alstom, two of the companies involved in the consortium that signed the contract with the State of Israel to build and manage the JLR (Barghouti, 2009). In addition, more than 170 Palestinian political parties, unions, organizations and networks, 'representing a substantive majority of Palestinian civil society, issued a historic call for Boycott, Divestment and Sanctions, or BDS' (Barghouti, 2009: 50), and opposed international support for and economic cooperation with the JLR project. The Civic Coalition for Palestinian's Rights in Jerusalem has issued a report in which the consequences and effects of the JLR on the Palestinian population are addressed. While the report stresses the building and construction process of the JLR as harmful to the Palestinian population and businesses in Shuafat, it also states that the 'impact of the Light Rail's construction and operation cannot be assessed separately from the existence of approximately 200,000 Jewish settlers who reside in 16 settlements within occupied East Jerusalem' (Civic Coalition for Jerusalem, 2009: 8).

The core of Palestinian critique of the JLR project lies in the manifest claim to the entirety of Jerusalem that the project embodies. The territorial continuity the JLR provides between the center of Jerusalem and its suburbs/settlements not only emphasizes the Jewish claim to a united Jerusalem, but also enables it by means of quick transportation (Pullan, 2013). As Baumann (2014) states, Palestinians argue that the JLR 'quite literally—cements the presence of settlements in East Jerusalem, making their presence more permanent and perhaps irreversible' (online article, no page number). As an outcome of Israeli planning strategies, the JLR is thus the result of different politics and policies that use infrastructure as a tool for political ends. At the same time, its physical presence also creates a situation of 'uneasily shared space' (Baumann, 2014). Thus, Palestinians that heavily depend on the mobility the train provides, face and use an infrastructure in a city, the Jewish-Israeli prerogatives of which they politically oppose. Being singled out as a Palestinian (along identification markers such as language, identity papers or appearance) in this 'uneasily shared space' means to be marked as posing a potential security threat. It allows security personnel to check identity cards and request people to leave the JLR. This also enforces Israeli dominance and control. On the other hand, the JLR leaves many Palestinian residents in the city disconnected. Although suggesting otherwise (see above), the JLR does not stop in all Palestinian neighborhoods, hence it creates 'gray spaces' which are a 'range of unplanned urban zones, lacking certainty, stability and hence development' (Yiftachel,2009a: 243) amidst planned residential areas for Israelis. Palestinian residents are thus, although part and residents of the city, 'out of the reach of hegemonic projects' such as the JLR but 'yet within the economy and "ground" politics' of the city itself (Yiftachel, 2009a: 245). Not being part of the population that is planned for in the city, Palestinians have clearly realized the way the JLR has altered their neighborhoods, regardless if they are included (Shuafat) or excluded (Beit Hanina) from the service it provides.

Thus, the JLR is being turned into a site on which the political plays out in many ways and forms. For Isin (2002), 'being political means to constitute relationships between oneself and others either via affiliation and identification, or agon and estrangement' (32). The JLR, as a space of encounter, is therefore productive of this difference, not only in the way people identify each other as belonging to one group or another, but also in the way difference is emphasized as a potential threat.

It is in this context that the violent escalations in Jerusalem and recent attacks around the JLR have to be understood. Instead of acts of mere barbaric destruction, as it was put in Israeli media, 'the destruction was [. . .] instead a highly symbolic act' (Baumann, 2014). It targeted the symbolic and representational unification of Jerusalem that the JLR stands for, notwith-

standing the service it provides. And it targeted the 'difference machine' that 'relentlessly provokes, differentiates, positions, mobilizes, immobilizes, oppresses, liberates' (Isin, 2002: 284), territorializes and de-territorializes (Höhne, 2012).

The anger that Palestinians turned against the infrastructure was an act of contestation 'that constitutes them as active subjects of their own making' (Isin, 2002: 273). It also was an acknowledgement of their non-belonging to a Jewish Jerusalem, through which they enabled themselves 'as political agents under new terms, taking different positions in the social space than those in which they were previously positioned' (Isin, 2002: 276). In Jerusalem, Palestinian presence is seen as an obstacle to Jewish unity and territorial continuity. Palestinians are therefore rendered invisible in many ways on a physical and symbolic level. Their neighborhoods are turned into 'peripheral, weakened and marginalized spaces' (Yiftachel, 2009a: 243). Their existence is neglected and forcefully contained by means of planning and constructing.

Against that, when Palestinians attempt to reinforce their presence through violence, they perform a political act of becoming visible. The act of attacking the JLR can thus be seen as a moment 'when the natural order of domination is interrupted by the institution of a part of those who have no part' (Ranciere, 2004: 123). These acts of becoming political institute a sense of belonging for those that are otherwise rendered non-citizens and constructed as outsiders. Yiftachel sees the recourse to violence not as an abnormal or barbaric act, but rather as a collective antagonism to the hegemonic order (Yiftachel, 2009a). He suggests that mobilization can turn violent once marginalized groups become politically aware of the inequality and exclusion they are subjected to (Yiftachel, 2009a). In this way, being in the city, while being prevented from moving freely in it or settling and building lives therein, has In return, the recent events and deadly attacks on passengers of the JLR have increased security measurements such as the deployment of surveillance balloons over stations in Shuafat. Already, passenger numbers have decreased by more than 20% and media reports quote passengers who express feelings of unease during the ride, Jewish Israelis and Arab Palestinians alike (Booth and Eglash, 2014). The JLR as a place of encounter has thus turned into a place in which suspicion, fear and control dominate. Amidst the ongoing tensions in Jerusalem, Palestinian residents and Israeli citizens of Jerusalem thus increasingly fear the mutual encounter, expecting the respective 'other' to be a threat. The heightened security measurements, such as camera deployment, high border police presence and the application of surveillance techniques such as balloons might prevent a future attack, but also create an all prevailing sense of insecurity. impacted on the Palestinian notion of belonging in Jerusalem. Or as Isin (2002) puts it, 'the city is a crucial condition of citizenship in the sense that being a citizen is inextricably associated with being of the city [. . .] Being political means being of the city. There is no political being outside the (difference) machine' (283–284).

In return, the recent events and deadly attacks on passengers of the JLR have increased security measurements such as the deployment of surveillance balloons over stations in Shuafat. Already, passenger numbers have decreased by more than 20% and media reports quote passengers who express feelings of unease during the ride, Jewish Israelis and Arab Palestinians alike (Booth and Eglash, 2014). The JLR as a place of encounter has thus turned into a place in which suspicion, fear and control dominate. Amidst the ongoing tensions in Jerusalem, Palestinian residents and Israeli citizens of Jerusalem thus increasingly fear the mutual encounter, expecting the respective 'other' to be a threat. The heightened security measurements, such as camera deployment, high border police presence and the application of surveillance techniques such as balloons might prevent a future attack, but also create an all prevailing sense of insecurity.

Thus, the JLR, once praised as a means of coexistence in Jerusalem, where passengers face each other during their journeys, has not brought the city residents closer together. Rather, it

has actually deepened the divide as it has come to symbolize much more than mobility and transportation improvement. The JLR, for Palestinians, further proves the intention of Israeli authorities to enforce their claims to the whole city of Jerusalem. Hence, the continuity that the JLR provides territorially manifests those claims on the ground. With hardly any space left to negotiate their sense of belonging to a city that renders them strangers by means of classification and control, some Palestinians have taken to the streets to attack one of the most visible instances of their non-belonging to the city. In this paradoxical sense, the JLR has thus made Palestinians in Jerusalem visible again. While their protests, vandalism and violent attacks are often presented as pure barbarism, seeing them in the context of the struggle over the city helps to circumscribe their political dimension. Coming from the 'gray spaces' of the city, which are excluded from the official maps and narratives of the united Jewish city, Palestinians have turned to violence in order to express their disagreement with the way they are rendered invisible in the city—or visible only when it comes to matters of threat and security. Yet, the way those protests have been answered by the Israeli authorities indicates not only the reciprocity between hegemonic and counter-hegemonic forces, but also the asymmetries that characterize this relation.

Conclusion

The JLR is as much the outcome of the politics of infrastructure as a site of political contestation. In a city like Jerusalem, contested and territorially disputed between Israelis and Palestinians but unilaterally annexed and claimed by the Israeli authorities, a project such as the JLR is thus a tool of politics and a site of the political together. Infrastructure, as has been discussed throughout the paper, is an important governance tool that materializes planning as a process of inclusion and exclusion, territorialization and de-territorialization. That is, infrastructure is decisive in any city and adds to the specific urban context in every city. Its visible and allegedly neutral existence sheds light on processes of power distribution as well as ideas of belonging and non-belonging that shape the situation of citizens and noncitizens, respectively. Thus, infrastructure as materialized governance not only manifests, but also creates difference; difference in the ways it connects and disconnects people, difference in the way it serves its inhabitants and difference in the way they are represented and treated. This 'differencemachine' as the generator for political contestation and negotiation is not only prone to conflict, it is part of the ongoing conflict around space, ownership, belonging and rights in the city itself. As such, infrastructure reproduces existing power struggles in conflict cities and can also deepen political and societal cleavages, even in places not as racialized as Jerusalem. Here, I follow Jonathan Rokem (this issue) in his suggestion that the research on processes of planning in Jerusalem (such as the JLR) 'can be useful in advancing our understanding of the relation between planning conflicts, and power in a growing number of cities worldwide'. While the discussion points to particular specificities at play in Jerusalem, this paper also suggests the inclusion of infrastructure in the analysis of the politics of urban regimes, as an important element of materialized power that brings about processes of alterity, identification, negotiation and resistance. As such, it is important to pay careful attention to the diverse and different urban structures that form and govern cities and to discern their particular forms and appearances while analyzing their potential impact. Thus, what is at stake in the situated history and infrastructure of Jerusalem might have different outcomes in cities where infrastructure has brought about new forms of urban participation and inclusion, such as in Casablanca (Morocco) for example.

With regards to the discussion above, what then can be learned from the JLR project with regards to the politics of infrastructure and political infrastructure approach? I suggest that the

findings are twofold: infrastructure is never neutral and always already inherently political, especially as an outcome of politics. Likewise, it is not only in a politically, socially and religiously contested city such as Jerusalem, that politics and infrastructure reflect existing power relations and constitute a site through which the contestation unfolds. The politics of infrastructure and political infrastructure are thus mutually constitutive. The former leads to the latter, while the latter warrants the former, which together cause contestation.

References

Aldermann DH (2008) Place, Naming and the Interpretation of Cultural Landscapes. In: Azaryahu M and Kook R (2002) Mapping the Nation: Street Names and Arab-Palestinian Identity: Three Case Studies. *Nations and Nationalism* 8 (2): 195–213.

Barghouti O (2009) Derailing Injustice. Palestinian Civil Resistance to the 'Jerusalem JLR'. *Jerusalem Quarterly* 38: 46–75.

Baumann H (2014) The Heavy Presence of Jerusalem JLR: why Palestinian Protesters Attacked the Tracks. *Open Democracy*, 27 November. Available at: https://www.opendemocracy.net/arab-awakening/hannabaumann/heavy-presence-of-jerusalem-light-rail-why-palestinian-protesters-attac. (accessed 17 October 2023).

Booth W and R Eglash (2014) Jerusalem Train Line Destined to Connect Jews and Arabs has Widened Bitter Divide. *The Washington Post*, 3 November. Available at: http://www.washingtonpost.com/world/middle_east/jerusalem-train-line-destined-toconnect-jews-and-arabs-has-widened-bitter-divide/2014/11/01/331d11ea-5f73–11e4-9f3a-7e28799e0549_story.html. (accessed 17 October 2023).

Chiodelli F (2012) The Jerusalem Master Plan. Planning into Conflict. *Jerusalem Quarterly* 51: 5–20.

Chiodelli F (2013) Re-shaping Jerusalem: The Transformation of Jerusalem's Metropolitan Area by the Israeli Barrier. *Cities* 31: 417–424.

Civic Coalition for Defending Palestinian's Rights in Jerusalem (2009) The Jerusalem JLR Train: Consequences and Effects. Available at: http://civiccoalition-jerusalem.org/system/files/documents/jerusalem_light_rail.pdf (accessed 27 November 2014).

Eisenbud D (2014) Jerusalem Municipality to Deploy Surveillance Balloons over Arab Neighborhoods. *The Jerusalem Post*, 29 October. Available at: http://www.jpost.com/Israel-News/Jerusalem-Municipality-todeploy-surveillance-balloons-over-Arabneighborhoods-380189. (accessed 17 October 2023)

Elden S (2004) *Understanding Henri Lefebvre. Athlone Contemporary European Thinkers*. London, New York: Bloomsbury Academic.

Fields G (2010) Landscaping Palestine: Reflections of Enclosure in a Historical Mirror. *International Journal of Middle East Studies* 42 (1): 63–82.

Graham S (2009) *Disrupted Cities: When Infrastructure fails.* New York: Routledge.

Graham S and Marvin S (2001) *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*. London, New York: Routledge.

Hasson N (2009) In Honor of the Light Rail Avshalom Kor is Hebrewizing Jerusalem (Hebrew). *Haaretz*, 28 December. Available at: http://www.haaretz.co.il/news/education/1.1296959. (accessed March 6, 2015).

Hasson N (2010) J'lem Train Company Asks Passengers: 'Do You Mind Traveling with Arabs?'. *Haaretz*, 20 August. Available at: http://www.haaretz.com/print-edition/news/j-lemtrain-company-asks-passengers-do-you-mindtraveling-with-arabs-1.309101. (accessed March 6 2015).

Hasson N (2014) Officials Slam 'Racist' Jerusalem JLR Survey. *Haaretz*, 23 August. Available at: http://www.haaretz.com/print-edition/news/officials-slamracist-jerusalem-light-rail-survey-1.309620?localLinksEnabled=false. (accessed March 6 2015).

Höhne S (2012) An endless flow of machines to serve the city. Infrastructural assemblages and the quest for the metropolis. In Brantz D, Disko S, & Wagner-Kyora G. (eds.) *Thick space. Approaches to metropolitanism*. Bielefeld, Piscataway, NJ: Transcript; [distributor] Transaction Publishers (Urban studies).

Isin EF (2002) *Being Political: Genealogies of Citizenship.* Minneapolis: University of Minnesota Press.

Jabareen YF (2010) The Politics of State Planning in Achieving Geopolitical Ends. *International Planning Development Review* 32 (1): 27–43.

Jefferis D C (2012) The 'Center of Life Policy': Institutionalizing Statelessness in East Jerusalem. *Jerusalem Quarterly* 93: 94–103.

Klein M (2005) Old and New Walls in Jerusalem. *Political Geography* 24 (1): 53–76.

Lefebvre H (1991) *The Production of Space*. Oxford, OX, UK: Blackwell.

Lustick IS (2004) Yerushalayim, al-Quds and the Wizard of Oz: Facing the Problem of Jerusalem after Camp David II and the al-Aqsa Intifada. *The Journal of Israeli History* 23 (2): 200–215.
Mazza L (2009) Centenary Paper: Plan and constitution – Aristotle's Hippodamus: Towards an 'Ostensive' Definition of Spatial Planning. *Town Planning Review* 80 (2): 113–141.
McFarlane C and Rutherford J (2008) Political Infrastructures: Governing and Experiencing the Fabric of the City. *International Journal of Urban and Regional Research* 32 (2): 363–374.
Nolte A and Yacobi H (2015) Politics of Representation. *Cities* 43: 28–36.
Pfeffer A (2012) Jerusalem's Public Transport System as Metaphor for Israel in 2012. *Haaretz*, 6 January. Available at: http://www.haaretz.com/print-edition/news/jerusalem-spublic-transport-system-as-metaphor-for-israel-in-2012-1.405732. (accessed 6 March 2015).
Pullan W (2013) Conflict's Tools. Borders, Boundaries and Mobility in Jerusalem's Spatial Structures. *Mobilities* 8 (1): 125–147.
Pullan W, Misselwitz P, Nasrallah R, and Yacobi H (2007) Jerusalem's Road 1. *City* 11 (2): 176–198.
Ranciere J (2004). *Disagreement: Politics and Philosophy*. Trans. Rose J. Minneapolis: University of Minnesota Press.
Rokem J (2013) Politics and Conflict in a Contested City. Urban Planning in Jerusalem under Israeli Rule. *Bulletin du centre de recherche a` Jerusalem* 23: 1–12.
Safier M (2001) The Struggle for Jerusalem: Arena of Nationalist Conflict or Crucible of Cosmopolitan Coexistence. *City* 5 (2): 135–168.
Sales B (2014) Symbol of Jerusalem's Progress, JLR Becomes Terror Target. *JTA,* 10 November. Available at: http://www.jta.org/2014/11/10/news-opinion/israel-middle-east/symbol-of-jerusalems-progresslight-rail-becomes-terror-target#ixzz3JPhEXmL2. (accessed 17 October 2023).
Sherwood H (2014) Jerusalem's JLRway: Commuting with a Rifle Through the Conflicted City. *The Guardian,* 19 May. Available at: http://www.theguardian.com/cities/2014/may/29/jerusalems-light-railway-commuting-with-a-riflethrough-the-conflicted-city.(accessed March 6, 2015).
Shlay AB and Rosen G (2010) Making Place: The Shifting Green Line and the Development of 'Greater' Metropolitan Jerusalem. *City & Community* 9 (4): 358–389.
Shoval N (2013) Street-naming, Tourism Development and Cultural Conflict: The Case of the Old City of Acre/Akko/Acca. *Transactions of the Institute of British Geographers* 38 (4): 612–626.
Star S L (1999) The Ethnography of Infrastructure. *American Behavioral Scientist* 43: 377–391.
Thawaba S and al-Rimmawi H (2013) Spatial Transformation of Jerusalem: 1967 to Present. *Journal of Planning History* 12 (1): 63–71.
Yacobi H (2012) Borders, Boundaries and Frontiers. Notes on Jerusalem's Present Geopolitics. *Eurasia Border Review* 32: 55–69.
Yanovski R (2015) Security Guard Recalls Terror Attack: We Saw Him Pull Out His Cleaver. *Ynet*, 6 March. Available at: http://www.ynetnews.com/articles/0,7340,L-4634139,00.html.
Yiftachel O (1998) Planning and Social Control: Exploring the Dark Side. *Journal of Planning Literature* 14 (4): 395–406.
Yiftachel O (2009a) Critical Theory and "Gray Space": Mobilization of the Colonized. *City* 13 (2–3): 240–256.
Yiftachel O (2009b) Theoretical Notes on "Gray Cities": The Coming of Urban Apartheid. *Planning Theory* 8: 88–100.
Young D and Keil R (2010) Reconnecting the Disconnected: The Politics of Infrastructure in the in-between City. *Cities* 27: 87–95.

C Infrastructuring Geographies: Histories and Presents in and of the Middle East and North Africa

Co-author: Ezgican Özdemir, Department of Sociology and Social Anthropology, Central European University Budapest, Hungary.

Published in: *Middle East - Topics & Arguments*, 10, June 2018, p. 5-20.
DOI: https://doi.org/10.17192/meta.2018.10.7794

Abstract

The 10th issue of Middle East – Topics and Arguments engages with infrastructure studies from an interdisciplinary perspective. It presents different empirical cases and theoretical discussions that take infrastructural formations and their effects both to the center stage and as the analytical focus. In this editorial, we first discuss two epistemic locations from which infrastructure can be studied. Then, we highlight the featured authors and the way each of them make compelling cases through the lenses of material and social infrastructures in different MENA contexts. In light of these, we argue that infrastructures, as the material conditions of modern human life, have shaped and continue to shape geographical constructs of the Middle East and North Africa. Lastly, we call for further social and historical research to investigate how infrastructural systems as material and symbolic networks of imperial expansion and exploitation have contributed to the geographical and political entities that make up the construct called MENA.

Keywords: materiality, infrastructure, Middle East, North Africa

Introduction

Infrastructures, as fundamental components of modern human life, offer a rich empirical field to study complex sociopolitical relations and processes in the contemporary world. In dedicating the 10th META issue to the concept of infrastructure, we, along with the featured authors, join in the fruitful discussions about its intriguing and at times ambivalent roles, forms and functions in the Middle East and North Africa (MENA).

The articles in this issue all engage infrastructures in MENA contexts from different perspectives. In doing so, they show that the field of infrastructure studies offers compelling ways to address issues of power, governance and its technological underpinnings in the region. That is, in tracing infrastructural formations, the process of their planning and implementation, as well as their everyday workings, the social is illuminated as a configuration of relations rather than the outcome or activity of several actors or institutions. Thus, the scholarly engagement with infrastructure directs our attention away from assuming the boundedness of fixed entities. Rather, it allows us to study the relations and processes that take place between and among actors, institutions and technologies, understanding their formation as un/intended consequences, not a presumption of infrastructural relations.

Infrastructure has already been recognized as “a central conceptual tool – a productive metaphor – for critical theory and the analysis for social life” (Appel et al., 2015) and thus as “compelling sites for qualitative social research” (Harvey et al., 2017: 27). Yet, the case of infrastructure in and of the MENA region has been less prominently discussed in social sciences and area studies so far. Thus, we seek to address this shortcoming with this issue.

Toward this end, the 10th META issue features case studies on the role of infrastructure in shaping everyday life, relations of power, forms of governance and the technologies of rule and resistance in the MENA. All authors draw on empirical work and open new ways of engaging with history, politics and sociality in the region. In developing ideas from different contributions, we suggest at the outset of this editorial that in the future, more work should be dedicated to infrastructure as a driver and vehicle of engendering the Middle East and North Africa as a region in itself, questioning the assumptions of the boundedness of the region and drawing attention to the imperial and colonial legacies of constructing a Middle East by means of infrastructure.

The structure of this editorial is as follows: First, we present the two conceptual locations from which infrastructure can be looked at and studied. The main difference between them lies in

the questions that are posed to infrastructure: depending on whether one wants to study what infrastructures are in their materialities and what they do, or how they are produced, become as what they seem, and to what ends they are employed. Situating both perspectives in the recent debates in infrastructure studies, we give a brief overview of how infrastructure is approached conceptually and methodologically. The account of these different approaches enables a productive dialogue on questions of what constitutes the social underpinning of infrastructure itself. We then introduce and discuss five themes to study the social and political processes in connection to infrastructural systems: in/visibility of infrastructure, the relation between infrastructure and affect, infrastructure and sociopolitical imaginaries, de/territorializing effects of infrastructure and verticality/horizontality. These concepts are reflected in the articles in this issue and our own engagement with infrastructural formations in the MENA region. As such, we preface the case studies presented in the issue by putting them in conversation with the two conceptual locations and five main themes.

What is Infrastructure? The Complexity of Socio-technical Materials

The first perspective from which researchers approach infrastructure posits the fundamental questioning of their constitutive elements, or in other words, their material ontologies. Many studies on infrastructure are associated with theories and methodologies around the so-called "ontological turn" (Knox and Huse, 2015: 3), attending to everyday engagements with material formations and to the agency of objects, materials and things (Latour, 2007; Latour, 1992; Jensen and Morita, 2017). Through this turn, "materials themselves are being recognized as specific, relational, agential and, importantly, political" (Knox and Huse, 2015: 3). In this sense, priority is given to the agentive powers that infrastructural materials are assumed to hold, which have active roles in the constitution of social and political life. Generally, the influence of science and technology studies in building a "new materialist" approach has been quite extensive; especially in anthropological study, material and natural surroundings have come to the fore as the analytical focus in the ethnographic investigation of social worlds. It is especially compelling to unravel this new materialist perspective to infrastructures in our worlds because of the importance they give to fundamental conceptualizations on the social, subject, object and agent, "upon which such political concepts are founded" (Knox and Huse, 2015: 9). The turn to networks, assemblages of materials and the ways in which their intra-actions transform social and political life, holds the promise of ethnographically revealing and describing the social complexity and multiplicity in which we live (Star, 1999; Jensen and Morita 2017).

From this location, infrastructures are regarded as technological arrangements that impinge on socio-technical relations and their political repercussions. This new materialist turn in studying infrastructures puts forth a new language of understanding these built environments as "extended material assemblages that generate effects and structure social relations" (Harvey et al., 2017: 34). Furthermore, it brings to the fore objects and material properties of infrastructures and how those material conditions engage in an "open-ended and unpredictable 'dance of agency'" (Jensen and Brunn, 2015: 19) with human actors. In this regard, infrastructures such as electricity grids, sewage systems, pipelines, railway tracks and roads emerge as sites to study the materialization of political and societal relations – or, in a more Latourian sense, they point to how the social is assembled in the process of networking, designing and implementing infrastructure.

In many disciplines, the new materialist turn relates attention to object-agencies to exploring alternative understandings of "world-making" (Knox and Huse, 2015: 3) – in other words, how we make sense of different social worlds. So far, we touched upon not just agentive roles that infrastructural materials can assume, but also how those materials imply relationality amongst human and non-human actors. Brian Larkin argues that their ontology lies in the fact that "they

are things and also the relation between things" (Larkin, 2008: 329). According to this, infrastructures create the grounds on which flows of things and people are enabled. However, scholars who adopt the above-mentioned view on infrastructure's ontologies critique Larkin's description of "infrastructures having a particular ontology" as being "a closed loop" (Jensen and Morita, 2015: 82) that does not leave room for experimentation, transformation or unpredictable change. Such understanding points out that these built, inanimate things articulate mediation of certain things and people. They also have the capability to disconnect and leave other certain bodies and objects out of systems. Nevertheless, most importantly, in their materiality and malleability, they are capable of "making new forms of sociality, remaking landscapes, defining novel forms of politics, reorienting agency, and reconfiguring subjects and objects all at once" (Jensen and Morita, 2015: 83).

It is precisely this emphasis on such social analytical concepts that critics to the ontological or new materialist perspectives dwell on (Carrithers et al., 2010; Graeber, 2013; Keane, 2009). Accordingly, they argue that endowing agentive powers to objects and things and focusing on their active effects on social processes replace the critical analysis of power, state, economy, government, democracy or capitalism (Knox and Huse, 2015: 3).The focus on networks, relations, associations, and assemblages, they argue, comes at the expense of the critical analysis of political ideology and hegemony. It is, however, critiqued that instead of analyzing how infrastructure is embedded in the social structure and political economy, the new materialist focus replaces "powerful modes of framing and describing relationships of relative privilege, power and control" (Knox and Huse, 2015: 3) with thick descriptions of material engagements and their relations through following and describing the processes instead of critically analyzing them.

How Does Infrastructure Come About? The Production of Socio-material Relations

An approach to infrastructure that includes a critical stance towards the new materialist turn may start from looking at infrastructure from an "epistemological location" (Schnitzler, 2015). Seen from this location, infrastructure is not analyzed in its mere material expression but rather questioned for the socio-political conditions of its appearance and possibility. Interrogating how infrastructures come into being helps to trace the genealogies of their appearance and the structures that enable their workings. Instead of researching infrastructure in its relational complexity and materiality, this location looks at the immaterial structures that affect how infrastructures emerge and are represented, perceived and turned into tools of governmentality (Foucault, 1991).

Looking at the context of the production of infrastructures, be it knowledge, planning, architecture, etc. in which they are embedded, sheds light on the close links between infrastructural politics and infrastructures as sites of political contestation and struggle (Noltem, 2016). This is because such "epistemological location" zooms in on the underlying ideologies that drive the planning and implementation of infrastructural systems, pertinent to what they enable/disable or highlight/foreclose.

According to this "epistemological location "which some also call the "humanist" approach, as opposed to the "new materialist" approach introduced above (Knox, 2017; Knox and Huse, 2015), infrastructures are ideological constructs that equally embody and enforce power relations (Akhter, 2015). Infrastructure as an epistemological location means that the operations, production and functionalities of infrastructural systems work through certain political discourses on technology and modernity (Edwards et al., 2009: 6; Larkin, 2008; Nolte and Yacobi, 2015; Harvey et al., 2017; Scott, 1998). It helps to link infrastructure and its representation to

ideologies of progress and development (Harvey et al., 2017: 37; Scott, 1998; Kooy and Bakker, 2008). With the term “The Unbearable Modernity of Infrastructure”, Brian Larkin stresses how, by promoting circulation, infrastructures bring about change, enact progress and are thus deeply tied to ideas of freedom and liberty (Larkin, 2013: 332).

As supposed symbols of modernity and progress, infrastructures have also played a key role in the colonial consolidation of rule and political and social order. They proved to be important tools in the subjugation of the colonized natives and the exploitation of their social and natural environments. For instance, railways, ports and roads were at the forefront of the realization of the colonial enterprise by connecting the colonies to the metropole, enabling the economic development and thriving of the colonial regime. While they were crucial in territorializing the colonies and rendering them legible to colonial systems of governance, they also assumed key roles in representing the colonial enterprise as a civilizing mission, bringing modernity and development to regions represented as backwards and underdeveloped (Kooy and Bakker, 2008: 376). As such, infrastructures were and still are central to spreading “a political order that inscribes in the social world a new conception of space, new forms of personhood, and anew means of manufacturing the experience of the real” (Mitchell, 1998: ix). In light of James Scott’s work on the state, authoritarian and/or colonial regimes employ certain administrative and infrastructural technologies for establishing power and rule. Thus, a critical analysis of infrastructure will reveal how they played into the formation of “sites of governance” (Harvey et al., 2017: 37), disciplining and governing entire areas and creating populations, making them “legible” (Harvey et al., 2017: 2) through infrastructure.

The focus of how infrastructures come into being and how they appear to us as naturalized parts of our everyday life leads to questions about the production of the spaces we inhabit and move in. It directs our attention to the processes that structure and affect our everyday movement, enabling the mobility and provision of some while constraining it for others. The how of infrastructure forces us to trace the inner-workings of what infrastructures do and undo. By looking at how they are planned and implemented and by whom, as well as how they are framed and represented in political discourse, infrastructures can be approached as projects that seek to support political hegemony. Provision of infrastructural resources and mobility, because of their necessity for daily living, is hard to circumvent or boycott. Even if these infrastructural formations may be objects of contestation and struggle due to the politics they represent or enforce, their function to maintain everyday life and basic human needs makes them often indispensable and thus often inherently consensual. Infrastructures, approached from this perspective, shed light on the social contract between the state and its population and its inner workings and contradictions. The technological, operational and political processes that surround the work of infrastructure-making not only mediate how people relate to these technical and mundane systems, but also give us insights about their sense of belonging to the state or nation. Critics have argued that a perspective that understands infrastructures as political projects in the first place, fails to attend to the historically specific ways in which infrastructures “become politicized and depoliticized” (Folkers, 2017: 856). Seen from the new materialist perspective, an approach to infrastructures as ideological projects embedded in power relations forecloses any interesting and innovative perspective on their workings and effects as open-ended systems and processes. As such, this approach, according to such critical stance, runs the risk of imposing the researcher’s a priori presumptions on the research object instead of following the dynamics and complex relations of the object itself, allowing oneself to be surprised by unexpected observations and findings (Latour, 2007).

Reconciling the Two Epistemic Locations

Seen from both of these two perspectives, despite their differences, infrastructure is understood as a crucial driver of the social. Whether by looking at how the social is assembled through interaction with infrastructure or how the social is produced and made governable by means of infrastructure, both locations offer their own way in for researchers to engage with our contemporary worlds. However, our aim is not to present the two approaches as opposites or clear dichotomies. We see them as two different locations upon which infrastructure as a social science subject can be inquired. This should by no means foreclose that the engagement with infrastructure has to side with either of the positions. Rather, we contend that the two epistemic locations could very well be put in a productive dialogue in our investigations of infrastructures. To do this, it is necessary to scrutinize infrastructural spaces and formations, not only in their material components and their effects "as the grounds for a new politics", but also in their social underpinnings that spotlight "the reproduction of more conventionally framed forms of political power" (Knox and Huse, 2015: 4).We believe that infrastructure studies is afield in which the reconciliation of the two perspectives can be realized. Toward this end, in the following section we delve into five concepts, namely, in/visibility, affect, imagination, verticality, and de/territorialization. These concepts are productive analytical departure points where both the materiality and political production of infrastructures can be highlighted – within and beyond the MENA.

In/visibility of Infrastructure

One of the most widely discussed conceptual points about infrastructure is the question of its in/visibility. Many scholars (Star, 1999; Larkin, 2008; Graham and Marvin, 2001) have highlighted the vulnerability of infrastructures and discussed the notion that infrastructures only become visible upon breakdown. By visibility, they mean that infrastructures as networks of utility become tangible to the human and collective perception only once they fail to fulfill their promised functions. Beyond this, the discussion about in/visibility also points out how these vast webs of things are rendered politically visible in their already established, ever changing, and uncertain conditions (Mitchell, 1988; Larkin, 2008). This valuable undertaking has hitherto not been carried out with regard to the MENA region.

In our view, the discourse on the invisibility of infrastructure connotes a Western centric viewpoint (see Baumgardt in this issue) that assumes a seamless functioning of infrastructures. Such a line of thought predicates the West as the primary setting of research, as infrastructural systems are assumed to function smoothly in Western contexts. The already constructed and much contested dichotomy of West/Rest therefore is reinforced by this presumption, and the attention to in/visibility upon breakdown reproduces colonial and/or orientalist discourses. In the so-called Global South including the MENA region, it is increasingly observed that infrastructural arrangements cannot be assumed as fully functioning, or even fully present or established (Howe et al., 2015).The continual malfunctioning of infrastructural services, their need for repair and maintenance, as well as their absence imply that such "normative expectations of invisibility" related to the supposed functional presence of infrastructures (Appel et al., 2015) are inappropriate for the Middle East and North Africa.

Rather, infrastructural absence is deeply embedded in people's quotidian experiences, where breakdown and deterioration are either normalized or overcome by improvised techniques to get a hold on resources like water, electricity and so on. This points precisely to the contradictory character of infrastructures (Mitchell, 1988): that they are neither always durable nor vulnerable. In doing social research in/on the MENA region, we therefore believe that it is crucial to transcend such attention to respective dichotomies of in/visibility and function/breakdown.

To this end, we contend that scholarly works on infrastructural advancements or ruins in the MENA should attend to the historical colonial processes and post-colonial conditions which in/visibilize them in the first place. That is, rather than taking invisibility of infrastructures as the primary premise and focusing on when infrastructures become visible, we think it is important to ask how they became either visible to pay attention to or invisible to neglect and forget.

Sociopolitical Imaginaries and Infrastructure

So, what becomes visible once we inquire into the world of technical systems of infrastructures? Appel et al. point to two related things: a world that is both "already structured and always in formation". The underlying assumption for this is that the socio-technical world that infrastructures constantly shape cannot be analyzed through the visibilities and materialities alone. Rather, infrastructures are deeply charged with certain ideologies, political projects and social commitments. In other words, infrastructures speak directly to socio-political imaginaries that are driven by and embedded in modernity, progress, and nation-building projects.

While some infrastructural objects and networks emphasize people's everyday imaginations of a good life, modern living, or future aspirations, other vast systems are built specifically to be hypervisible in the techno-political arena. They may signify a historical or ideological project – whether it is one of socialist modernization (Schwenkel, 2015) or nationbuilding (Mrázek, 2002). Such material infrastructures epitomize the representation of an imagined nation, reproducing citizenship, national subjects, or a national ideology. Their aesthetic value or state of-the-art qualities symbolize and reinforce those political imaginations. Accordingly, their vastness and visibility are mobilized by states to enforce their political ideologies and communicate political authority to their citizens. Thus, when we study infrastructure, our object of inquiry is not simply technology and its material complexity, but also "the social and economic system in which it is embedded" (Winner, 1988: 122). In other words, infrastructures are "imaginative resources" (Knox and Huse, 2015: 9) with which everyday political engagement is rendered possible. Furthermore, infrastructures cannot be seen simply in their materiality, because they constitute an intersection of bodies, technologies, imaginations, ideas, and spaces (Simone, 2004: 408). On the one hand, technologies and spaces are made and reconfigured with specific conjunctural calculations that embody past failures and future political aspirations. On the other hand, such calculations that drive state powers to mobilize capital for infrastructural progress impact directly on how communities imagine their social and material worlds and how these infrastructural reconfigurations become sites of political contestation.

Affect and Infrastructure

Just as infrastructures are sites of political contestation, they are also sites of imagination and anticipation and aspiration (Reeves, 2017). As they can be desired, fantasized about, disappointed by, and longed for, infrastructures signify people's affective engagements vis-à-vis their natural, technological, and social surroundings. The analytical focus on affect in relation to infrastructures is rich and expanding in the social sciences. Likewise, the entwinement of technological transformations and the affective associations they elicit is emphasized to understand infrastructural worlds. As Harvey and Knox argue, the possibilities of how people relate to infrastructural changes that surround them "can dazzle[…] the glitter of progress, the lure of profit, the promise of circulation, movement and a better life as rational and scientific plans […] generate illusory effects" (Harvey and Knox, 2012: 534). Madeleine Reeves also specifies that such affective and imaginative engagements to material formations are rooted in "particular geopolitical configurations, engineering (im)possibilities, and political desires" (2). Thus, infrastructures are not just promises that may or may not be fulfilled in their intended

ways. They are also sites of imagination and new possibilities that are rendered thinkable by the very reconfigurations of infrastructures and how users relate to them.

If we take infrastructures as material conditions of possibility for human life, then their flexibility, unpredictability, and experimentality makes for an understanding of the "enchantments" (Harvey and Knox, 2012), imaginations and affective associations that are embodied in their materiality. In drawing on anthropological engagements with affective worlds and the social and political imaginaries that infrastructural systems illuminate, the networks of circulation, goods, people and also ideas and affects that are being circulated can be scrutinized. This provides a worthwhile examination of the embeddedness of infrastructures in political lives, which is particularly pertinent for historicizing the ways in which Middle Eastern and North African spaces came about. Relevant questions in this regard are how the peoples of this region were once confronted and still deal with certain hegemonic and imperial hierarchies; moreover, how do these infrastructurally reconfigured spaces reveal their affective and imaginative engagements with and against those established hierarchies?

The Verticality of Infrastructure – Doing and Undoing Territory

The imaginative and affective aspects of infrastructure play an important role in the perception of social hierarchies and its reflections in the built environment. Here, language has shaped how we talk and employ spatial metaphors, using expressions of verticality to signify people's position and standing in the world. Infrastructures are crucial tools in representing, materializing and enforcing these stratifications. Thus, thinking in conjunction with Stephen Graham's newly published book Vertical, our own research on infrastructures, and the contributions featured in this issue, we suggest an approach to infrastructure that attends as much to its vertical as to its horizontal appearances, functionings and splinterings. Some scholars have already drawn attention to the need to study geographical and urban phenomena in their three-dimensional, volumetric and vertical dimensions(Weizman, 2012; Elden, 2013; Graham, 2018). Opposing the "dominance of remarkably flat perspectives about human societies in key academic debates about cities and urban life(Graham, 2018: 1-2), we therefore argue for a perspective that attends to the way everyday life is structured vertically – and to the role of infrastructure in this process. Despite the growing concern with the verticality of politics and society, only a few scholars have hitherto highlighted what role infrastructure plays in doing and undoing verticality, for example through technologies such as "satellites, aircraft and drones high above" (Graham, 2018: 10-11) and bunkers, tunnels and sewage canals "deep below". While Weizman, Elden and Graham have started a crucial endeavor by setting out to verticalize our understanding of geopolitics (Elden, 2013: 7; Graham, 2018; Morrison, 2017), it is about time to expand the increased attention to verticality to the study of infrastructural systems, researching how they are employed as technologies of power, shaping and reshaping contemporary politics. This is because more attention should be paid to infrastructure's role inshaping the verticalities and powerful political and social realities of the contemporary world.

Researching infrastructure in its vertical appearance helps critically engage with the built environment as a site of the production and reflection of political power. Tracing the processes and relations through which verticality is produced helps us conceive of infrastructures as tools of an existing social order, which is constantly stabilized and de-stabilized through forms of consent and dissent.

De/territorializing Infrastructures

Adding a vertical perspective to the critical analysis of infrastructural systems also allows for a different understanding of processes of de/territorialization. Leaving behind long existing assumptions that territory is about the boundedness of land, political sovereignty and political rule over a specific part of land, the concept of verticality helps us to understand territory as "a process, not an outcome" of political technologies such as "techniques for measuring land and controlling terrain" (Elden, 2013: 2). Infrastructure, then, is a powerful tool in doing and undoing territory.

While de-territorializing practices are closely tied with forms of territorialization (Elden, 2009: 11), infrastructural systems do two things in these processes: they are employed as material forms to support and hinder processes of territorialization; and infrastructural functions themselves are increasingly splintered and de-territorialized, which enables certain circulations while disabling others (Graham and Marvin, 2001). Take, for example, a road: While it may constitute a form of increased mobility and speed for some, it can hinder the access and movement of others (Salamanca, 2015). As for the splintered functioning, infrastructural systems can be forcefully destroyed and hindered from working in order to de-territorialize national, social or ecological claims of specific groups (Graham, 2011; Weizman 2012). The forceful destruction of houses, electricity networks and water supply systems has thus turned into a form of warfare in which the life sustaining environment and infrastructure of some groups is targeted in to forcefully enact the national and territorial claims of another. Here, infrastructures play a crucial role – both in claiming territorial sovereignty and enforcing it. Moreover, doing politics by means of infrastructure also steers our attention to "infrastructural power as bio- and necro-power", enabling states to "gain power not only over their territories but also over the life of their populations" (Folkers, 2017: 7). Thus, the territorializing effects of infrastructure point to the inherent biopolitics in their workings and functionings. As such, we believe that researching the violent ramifications of infrastructure's workings is an important future task that could be done through paying close attention to the vertical and horizontal dimensions of doing and undoing territory in the contemporary world.

Infrastructures in/of the Middle East and North Africa

Overall, the in/visibility of infrastructures, their imaginative and affective qualities, their vertical/horizontal appearances, and the ways they de/territorialize contentious spaces are key conceptual tools to engage infrastructures – in/of the MENAregion as well as beyond it. As such, the featured articles in this issue all grapple with these five analytical points and understandings of infrastructure in their own ways. Below, we present these articles and outline their contributions to infrastructure studies in the Middle East and North Africa region.

As the featured author in the Meta section of this issue, Laurin Baumgardt focuses on infrastructures in breakdown. Presenting a theoretical discussion, he tackles the preconceived notion of in/visibilities of infrastructures that we discuss above by utilizing Martin Heidegger's conceptualization of "tool-beings". Baumgardt's overarching critique argues against the notion that infrastructures are invisible by definition. Moreover, he turns our attention from infrastructural systems with underlying political rationalities or aesthetic ideals into more mundane forms of infrastructure: ones that have a direct impact on the everyday livelihoods of individuals and communities. As such, Baumgardt makes us realize that infrastructural breakdown entails an always already present condition of being; that mundane but structured formations enabling physical sustenance and sociality are always in flux. To substantiate his theoretical argument departing from Heidegger, Baumgardt provides insights from the post-apartheid South African context and demonstrates infrastructural breakdowns through empirical cases. Overall, his

contribution conceptualizes how such mundane breakdowns reproduce micro-politics and shed light onto the everyday negotiations that communities deal with.

As in every META Journal issue, the Anti/Thesis section puts two distinct views on the respective topic into conversation. To enable a comparative examination across cases, contexts and conceptual understandings, the Anti/Thesis section for this “Infrastructure” issue spotlights two authors that present two different contexts, namely tramway infrastructures in Casablanca and in Jerusalem. This helps to think about transportation infrastructures in contrasting ways.

Cristiana Strava’s case study on the Casablancan tramway demonstrates how state provisionings of urban transportation services not only visibilize already existing social divisions, but also enable disenfranchised urban populations to participate and engage in everyday politics. Strava highlights that infrastructural intervention can allow new ways of imagining and practicing urban citizenship and social justice. As such, infrastructural upgrade can open up new ways of exploring the state/society divide and drive individuals and communities to “develop a sense of self as a resident of a city, as a member of a nation, or as a part of other larger social wholes” (Angelo and Hentschel, 2015: 308). Strava’s ethnographic account demonstrates how the newly state-built tramway in Casablanca embodies not only ideals of modernity and progress, but also a materialized post-colonial atonement. This is a way of coming to terms with the past atrocities done to certain urban populations of Casablanca. In doing so, Strava also reverses the aforementioned overemphasis on the visibility upon breakdown of infrastructures. She argues that just as a breakdown of infrastructure can visibilize larger political questions, working infrastructures also reveal political ruptures, contestations over urban citizenship, and historical traumas of marginalization. Further, Strava shows that the Casablancans’ affective engagements with spaces and vehicles of mobility offers a new way of understanding their political engagement and aspirations. These affective experiences relate directly to both the infrastructural promises of development as well as their everyday disappointments and feelings of prolonged “indignity and exclusion” (Strava, 2018: 25) because of material failures of existing infrastructures.

Whereas Cristiana Strava perceives the tramway as an infrastructural site that “help(s) articulate a new language of political participation and social recognition”, which brings about a “foretaste of what the future might hold for all Casablancans” (Strava, 2018: 27), Hanna Baumann in her Anti/Thesis article focuses on the violence that infrastructural systems can exert in the urban context of Jerusalem. She discusses the newly built Jerusalem Light Rail that connects the Western parts of Jerusalem to the Eastern parts, thereby crossing and running through the occupied Palestinian parts of the city. Baumann shows how infrastructural connectivity enforces Israeli territorial claims to a united Jerusalem, which forcefully de-territorializes and derails Palestinian land and communities. As such, she shows how Israeli politics and policies are constantly working to consolidate Israeli territory by means of de-territorializing any physical or imaginative future of an Arab-Palestinian Jerusalem. As Palestinians are included into the Israeli system of circulation, they are subjected to forms of surveillance and control. This form of biopolitics renders the Palestinian population and territory in East Jerusalem legible to Israeli state power. In dialogue with Strava’s piece on Casablanca, Baumann shows how the train, seemingly equally atoning for years of infrastructural neglect of the Palestinian communities in Jerusalem, is physically connecting Israeli settlements, which normalizes the Israeli presence in East Jerusalem. According to Baumann, Israel’s promise to improve “the quality of life through upgrading of infrastructure” cannot be understood as a form of atonement. Rather, the heavy felt presence of the train in East Jerusalem is working to foreclose any Palestinian future for the city (Baumann, 2018: 30).

Through their articles, both Strava and Baumann show that infrastructures are sites for states to draw and withdraw support based on ideological and political motivations. On the one hand,

the tramway in Casablanca, seemingly embodying state atonement and social justice, engenders new ways for urban marginalized dwellers to participate in politics. On the other hand, the Light Rail in Jerusalem becomes a material site of territorializing and consolidating Israeli claims to spatial sovereignty. It renders the mobility infrastructure a political space of violence and control, henceforth failing to bring social integration to a politically contested city. The Focus section of this issue presents a set of case studies from around the region, focusing on various types of infrastructural spaces and processes. While some trace ethnographically how infrastructures play a key role in politics, others remind us of the historicity of infrastructural reconfigurations.

As we contend in this issue, the visibility upon breakdown paradigm does not necessarily apply to MENA contexts. Anna Rowell's account of Cairo's mobility infrastructures demonstrates that what needs to be tackled is not when or what infrastructures break down, but how constant malfunctioning or infrastructural service inequalities are dealt with through engendering informal and improvised strategies. She presents in her article how informal elements of Cairo's urban infrastructural network render certain marginalized spaces as sites of production, exchange and expressions of collective identity. Caught between self-governance and state reliance, these disconnected communities in Cairo develop informal structures to have freedom to work, socialize and live. To some extent, this serves to subvert the exclusion to which they are subjected. Thus, Rowell shows how improvised and informal systems of transportation such as tuk tuks and microbuses constitute alternative ways of mobility and connection, which are operated as collaborative practices (Simone, 2004). As such, with Rowell's contribution to this issue, dysfunctional and exclusionary infrastructures come to the fore as sites of improvisation, participation, and work, which can be read with all their constitutive relations as open and inclusive systems of operation.

While most of the articles in this issue are concerned with aboveground, horizontal, and conventional infrastructures, Toufiq Haddad introduces the need to study the politics of infrastructure in both their three-dimensional workings and their capacity to territorialize and de-territorialize. Thus, in his article, Haddad scrutinizes tunnels as sites of political contestation between Israelis and Palestinians, but also intra-Palestinian class struggles. He points to the vertical dimension of domination and the material and social ways of trying to overcome it. In line with Graham, Haddad reads tunnels through their embeddedness in the broader picture of military occupation, domination and resistance. Tunnels in this sense are "subterranean insurgencies" (Graham, 2018: 348) that enable people, money, trade, medical help and arm supplies to circumvent national borders, which renders the "above-ground discourses of perfect, militarized control as little more than a post 9/11 'security theatre'" (Graham, 2018: 349). Highlighting the rise of the tunnel-infrastructure against the background of the different stages of Israeli-Palestinian negotiations, circles of violence and asymmetric warfare, Haddad understands tunnels as infrastructures of "parallel politics" in which the attempt of the Israeli government to gain, sustain and deepen its territorial control is literally undermined and de-territorialized by the tunnels. Contrasting the tunnels below the Gaza Strip with the Israeli infrastructure of control that implies other tunnels, bypass roads, and electricity networks, Haddad suggests that more attention should be given to "three Arab dimensions". This is opposed to what Eyal Weizman has called the "three Jewish dimensions" of the Israeli occupation (Weizman, 2012: 4). Studying Palestinian infrastructural systems such as the tunnels implies understanding them as a "promise to circumvent and perhaps even subvert both the occupation's tentacles of control, while reconnecting its fragmented parts" (Weizman, 2012: 126), allowing for Palestinians to imagine and sometimes experience a life beyond the enforced Israeli closure.

As we welcome two articles in the 10th issue that focus on Israel/Palestine, we also found it fitting to interview a prominent sociologist of the region, Ronen Shamir, whose most recent published book is on electrification of Mandate Palestine under British rule. For the Close Up

section, Shamir answered our questions that directly relate to some of the topics and themes discussed throughout the issue. Rejecting any notion of infrastructure as the stage on which "the social" takes place, Shamir stresses infrastructural assemblages as "the social in action" (57), highlighting how "power is a product of certain figurations rather than a driving force or a stock waiting to be deployed" (55). Speaking directly to the themes featured in the Focus section, Shamir stresses the concurrence between ordinary everyday practices that take infrastructure for granted and forms of infrastructural warfare that try to pause, hinder and destroy this everydayness. In addition, Shamir talks about his ANT approach to infrastructural objects and contends that infrastructures like electric grids have active participations shaping politics and generating or reifying inequalities and systems of control as in the case of Palestine. As we also conclude below, Shamir agrees that infrastructures of the MENA region are crucial objects of analysis in studying further, how geographies are constructed and reconfigured by means of infrastructural interventions.

Moving further away from the focus on material engagements with infrastructures and into their representations, Nazlı Özkan steers our attention to a less studied aspect of infrastructure: the involvement of the state in providing infrastructural services for places of religious worship. Presenting a different approach to the contentious character of infrastructures, she delves into notions of recognition and belonging within the realm of religious politics in the Turkish context. In this article, we see the recurring theme of how infrastructural provisioning can also be a state tool to manipulate who gets recognition and citizenship rights and how this affects people's imaginations and senses of belonging within the larger society. Specifically, Özkan ties together two seemingly distinct realms of political life: the recognition of religious minorities along the religious and political hierarchies within a given context, and state provisioning of infrastructural services. She tackles the Alevi minority issue in the Turkish context by looking at how certain religiosities are rendered legitimate, while others are regarded as "undeserving". As such, to this day, the Alevi houses of worship, called cemevi, are not recognized as equivalent to a mosque or a church in Turkey. Thus, Özkan's account of Sunni Islamic hegemony in so-called secular Turkey highlights how utility bill statesponsorship for electricity and water can not only reproduce religious hierarchies, but also render the recognition of cemevis to an economic distribution issue. Therefore, infrastructures, their state provisioning, and political debates around rights to access to these utilities all illuminate larger political questions that the Turkish Alevi minority grapples with.

As we argue in the conclusion of this editorial, approaching infrastructures and their imperial and colonial pasts is especially pertinent in the Middle East and North Africa. In line with this move to historicize infrastructural arrangements and their social and cultural underpinnings, Olga Verlato presents a detailed analysis of how a song about (opposition to) military conscription circulated the social terrain of Ottoman Egypt in early 19th century. Verlato takes the song "Fī-l-Jihādiyya" to scrutinize its journey in Egypt. As a form of infrastructural and cultural artifact, the song was transmitted from urban centers into rural settings through a social infrastructure of itinerant performers. In bringing military history and cultural production into dialogue, Verlato argues that the scenario of the song not only sheds light on the exploitation of Egyptian men in the niẓām-ı cedīd army, but also the resistance mechanisms that extend to their familial contexts. Moreover, in providing a critique on the orientalist historiography of the song, Verlato traces the song's journey spatially and temporally. This helps to understand not only what the song signified in both urban and rural contexts, but also how it reveals the military and road infrastructural transformations and changing (im)mobilities of people between late Ottoman rule and British colonialism. Alluding back to Abdoumaliq Simone's contention on people as infrastructure, Verlato's contribution to this issue provides a unique understanding of how the

cultural connotations of infrastructural systems and formations, or in other words, how the human aspects attached with their cultural systems to built environments, are crucial analytical points to perceive larger questions about social histories and processes.

Conclusion

In the 10th META issue, we present to the reader a wide range of articles that grapple with social and political questions that occupy, shape, and reconfigure Middle Eastern and North African spaces and peoples in relation to infrastructures. As technological systems that are meant to enable and shape sociality, infrastructures animate philosophical questions on materiality, agency and structure as well as sociological inquiries into power and resistance, developmental governance, and technology and modernity. With this issue, we seek to move further and expand upon infrastructure studies by drawing together these questions and inquiries through the five themes that we have presented here. In line with the featured articles, our approach to infrastructure as a driver and outcome of the social highlights the relational aspects of infrastructure, arguing against prefabricated assumptions of fixed identities and the boundedness of territories and nations. Thus, following infrastructures in their becoming and working is a way to avoid and work against methodological nationalism (Wimmer and Schiller, 1980;). That is, instead of presuming the existence of bounded national entities, we pay attention to the constitution of subjectivities and imagined communities (Anderson, 2006) through infrastructural processes.

In applying this mode of thinking to the Middle East and North Africa region, we find it significant for further social and historical research to investigate how infrastructural systems as material and symbolic networks of imperial expansion and exploitation have contributed to the geographical and political entities that make up the construct called MENA. While this issue has brought forward new concepts and empirical work on infrastructure in the region, we suggest that future research should draw more attention to how infrastructures became complicit in shaping a geographical construct referred to as one region. This is because the terms Middle East and North Africa themselves are not only “deeply imbued with European and American military and colonial history” (Bowman, 2012). They also refer to a fabricated space in which boundaries and territories are predicated by past imperialist, colonial projects and military intervention that today act as a continuation of these legacies. Thus, in following sociologist Ronen Shamir’s view (interview section, this issue), we believe that the Middle East and North Africa as a geographical entity needs to be deconstructed in its manylayered historical and political processes. In doing so, it is crucial to not only historically investigate infrastructural networks that once materially mediated and connected people, things and ideas, but also to look for (dis)continuities in the subsequent multiple colonial reconfigurations of infrastructural space and networks. This will expand social research on infrastructure in the MENA region generally. More importantly, such expansion of research will help us transcend the geographical construct and its reinforced discursive fixations, so as to closely trace the networks and relations across and beyond national entities that dominate the representation of the region today.

Having outlined prominent conceptual interrogations from different contexts in the Middle East and North Africa, the 10th META issue links the debates on infrastructure with the critical engagements of larger social and political concerns of the region. This is not only the case regarding the different concepts, theories and methodologies that infrastructure could be approached with. We also see potential in looking at which (and whose) perspectives on infrastructure have been missing so far. This is especially the case when looking at infrastructure’s role in the reproduction of gender specifically and any other forms of produced difference more

generally. Engagement with gender as an object of inquiry directly in relation to people's infrastructural environments, a topic that is heavily understudied, is a task that should be taken on in the future. What are the material and social infrastructures at work when it comes to producing our everyday experience of the normal, and what becomes visible and hence acceptable by means of infrastructure? This not only applies to the role of gender as a category of difference, but in general to the question of how infrastructures become complicit in producing normality and hence normative orders that are based on the production and degradation of difference such as class and race and other forms of difference-based discrimination.

Other areas of engagement with infrastructure that are currently being further developed and do not appear, delve into the relation between infrastructures and questions of their securitization, scrutinizing how certain vital systems emerge as critical infrastructures that warrant specific measures of protection, even beyond legal regulations. The question of security and infrastructure equally revolves around digital infrastructures, their interaction with other non-digital systems and the challenge of handling digital flows that evade the control of nation states and cross the public/private divide when it comes to questions of taking responsibility for their functionings and breakdowns. This also applies to the role of nuclear infrastructures, whose inherent systemic risks and destructive potentials do not respect national borders, exposing the entire world to a vulnerability that has no limits.

Worldwide, as reflected in the multiple projects that research infrastructures, infrastructural formations are at the forefront of enabling, pushing and shifting the political, social, economic and cultural configurations between governments, corporations and civil society actors. The complexities they create and the conflicts they engender keep presenting a challenge to questions of governance, security, sustainability and of a livable future for the coming generations. Infrastructure's multiple applications not only facilitate the world we live in, but also create endless opportunities and contingencies, which support and equally endanger our existence. As such, studying infrastructure, its workings and breakdowns, and its potentials and dangers, as we contend, is a crucial driver of the search for a future in a complex and conflicted world – in and beyond a construct called MENA.

References

Akhter M (2015) Infrastructure Nation: State Space, Hegemony, and Hydraulic Regionalism in Pakistan. *Antipode*. Epub ahead of print 23 April 2015. Doi: 10.1111/anti.12152.

Anderson B (2006) *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Verso.

Hillary A and Hentschel C (2015) Interactions with Infrastructure as Windows into Social Worlds: A Method for Critical Urban Studies: Introduction. *City*. Epub ahead of print 01 April 2015. Doi: 10.1080/ 13604813.2015.1015275.

Appel H Anand N and Gupta A (2015) *Cultural Anthropology*, 24 September. Available at: https://culanth.org/fieldsights/714-introduction-theinfrastructure-toolbox. (accessed 28 March 2018)

Bowman GW (2012) Refiguring the Anthropology of the Middle East and North Africa. *The SAGE Handbook of Social Anthropology* (1) 2012: 678–710.

Bijker WE and Law J (2000) *Shaping Technology/Building Society: Studies in Sociotechnical Change*. Massachusetts Institute of Technology.

Carrithers M et al. (2010) Ontology Is Just Another Word for Culture: Motion Tabled at the 2008 Meeting of the Group for Debates in Anthropological Theory, University of Manchester. *Critique of Anthropology*. Epub ahead of print 28 May 2010. Doi: 10.1177/ 0308275X09364070.

Edwards PN et al. (2009) Introduction: An Agenda for Infrastructure Studies 10 (5): 364-375.

Elden S (2013) Secure the Volume: Vertical Geopolitics and the Depth of Power. *Political Geography*. Epub ahead of print May 2013. DOI: 10.1016/j.polgeo.2012.12.009.

Elden S (2009) *Terror and Territory. The Spatial Extent of Sovereignty.* Minneapolis MN: University of Minnesota Press.

Folkers A (2017) Existential Provisions: The Technopolitics of Public Infrastructure. *Environment and Planning D: Society and Space.* Epub ahead of print 12 March 2017. DOI: 10.1177/ 0263775817698699.

Foucault M (1991) *The Foucault Effect: Studies in Governmentality*. Ed. Burchell G, Gordon C et al. Chicago IL: University of Chicago Press.

Graeber D (2013) It Is Value That Brings Universes into Being. *HAU: Journal of Ethnographic Theory*. Epub ahead of print. DOI: 10.14318/hau3.2.012.

Graham S and Marvin S (2001) *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*. Routledge.

Graham S (2011) *Cities Under Siege: The New Military Urbanism*. Verso Books.

Graham S (2018) *Vertical: The City from Satellites to Bunkers*. Verso Books.

Harvey P and Knox H (2012) The Enchantments of Infrastructure. *Mobilities.* Epub ahead of print. DOI: 10.1080/ 17450101.2012.718935.

Harvey P, et al. (2017) *Infrastructures and Social Complexity: a Companion*. Routledge.

Howe, Cymene, Lockrem J et al. (2015) Paradoxical Infrastructures: Ruins, Retrofit, and Risk. *Science, Technology & Human Values.* Epub ahead of print 23 December 2015. DOI: 10.1177/0162243915620017.

Jensen CB (2015) Experimenting with Political Materials: Environmental Infrastructures and Ontological Transformations. *Distinktion: Journal of Social Theory*. Epub ahead of print 06 August 2015. DOI:10.1080/160091 0x.2015.1019533.

Jensen CB and Morita A (2015) Infrastructures as Ontological Experiments. *Engaging Science, Technology, and Society*. Epub ahead of print 09 November 2015. DOI: 10.17351/ests2015.007.

Keane W (2009) On Multiple Ontologies and the Temporality of Things. *Material World*, 7 July. Available at: http://www.materialworldblog.com/2009/07/on-multipleontologies-and-thetemporality-of-things/. (accessed 28 March 2018).

Knox H (2017) Affective Infrastructures and the Political Imagination. *Public Culture*. Epub ahead of print 1 May 2017. DOI: 10.1215/08992363-3749105.

Knox H and Huse, T (2015) Political Materials: Rethinking Environment, Remaking Theory. *Distinktion: Journal of Social Theory*. Epub ahead of print 6 August 2015. DOI: 10. 1080/1600910x. 2015.1028419.

Kooy M and Bakker K (2008) Technologies of Government: Constituting Subjectivities, Spaces, and Infrastructures in Colonial and Contemporary Jakarta. *International Journal of Urban and Regional Research* 32(2): 375–391.
Larkin B (2008) *Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria.* Durham NC: Duke University Press.
Larkin B (2013) The Politics and Poetics of Infrastructure. *Annual Review of Anthropology*. Epub ahead of print 21 August 2013. Doi: 10.1146/annurevanthro-092412-155522.
Latour B (2007) *Reassembling the Social: an Introduction to Actor-Network-Theory.* Oxford: Oxford University Press.
Latour B (1992) Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts. In: Bijker WE and Law J (ed.) *Shaping Technology- Building Society*. Massachusetts: MIT Press, 225–259.
Mitchell T (1988) *Colonising Egypt*. Berkeley CA: University of California Press.
Mitchell T (2014) Introduction: Life of Infrastructure. *Comparative Studies of South Asia, Africa and the Middle East*. Epub ahead of print 01 December 2014. DOI: 10.1215/1089201X-2826013.
Morrison S (2017) Elevator Fiction: Robert Coover, Colson Whitehead, and the Sense of Infrastructure. *Arizona Quarterly: A Journal of American Literature, Culture, and Theory*. Epub ahead of print 01 September 2017. DOI: 10.1353/arq.2017.0017.
Mrázek R (2002) Engineers of Happy Land: Technology and Nationalism in a Colony. Princeton NJ: Princeton University Press.
Nolte A and Yacob H (2015) Politics, infrastructure and representation: The case of Jerusalem's Light Rail. *Cities* 43: 28–36.
Nolte A (2016) Political Infrastructure and the Politics of Infrastructure. *City*. Epub ahead of print March 2016. DOI: 10.1080/13604813.2016.1169778.
Reeves M (2017) Infrastructural Hope: Anticipating 'Independent Roads' and Territorial Integrity in Southern Kyrgyzstan. *Ethnos* 82 (4): 711–737.
Salamanca OJ (2015) Road 443: Cementing Dispossession, Normalizing Segregation and Disrupting Everyday Life in Palestine. In: Salamanca, OJ (ed.) *Infrastructural Lives: Urban Infrastructure in Context*. Abingdon: Routledge, 114–136.
Schwenkel C (2015) Spectacular Infrastructure and Its Breakdown in Socialist Vietnam. *American Ethnologist*. Epub ahead of print 14 August 2015. DOI: 10.1111/amet.12145.
Scott JC (1988) *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. London: Yale University Press.
Simone AM (2004) People as Infrastructure: Intersecting Fragments in Johannesburg. *Public Culture* 16(3): 407–429.
Star SL (1999) The Ethnography of Infrastructure. *American Behavioral Scientis*t 43 (3), 377–391.
Star SL (2002) Infrastructure and Ethnographic Practice: Working on the Fringes. *Scandinavian Journal of Information Systems* 14 (2): 108–122.
von Schnitzler A (2015) Ends. *Cultural Anthropology*, 24 September. Available at: https://culanth.org/fieldsights/713-ends. (accessed 25 March 2018).
Weizman E (2012) *Hollow Land: Israel's Architecture of Occupation*. London: Verso Books.
Wimmer A and Glick Schiller (2002) Methodological Nationalism and Beyond: Nation–state Building, Migration and the Social Sciences. *Global Networks* 2(4): 301–334.
Winner L (1980) Do Artifacts Have Politics? *Daedalus* 109(1): 121–136.

D Between Public and Private: The Co-production of Infrastructural Security

Co-author: Carola Westermeier, Department of Political Science, University of Amsterdam, Amsterdam, The Netherlands.

Published in: *Politikon* 35 (2020), 5, p. 1–19.

DOI: https://doi.org/10.1080/02589346.2020.1712831

Abstract

The paper proposes to use the concept of co-production to account for the mutual coproduction of private as well as public security actors and critical infrastructure. Through an exploration in the field of urban security provision, we aim to contribute to critical security studies by turning to the entanglements of public and private security actors in the process of securitising infrastructure. As the construction and provision of infrastructural security depends neither solely on public nor private actors but on their interaction, we propose the concept of co-production to account for these dynamics. Based on a focused ethnography, the paper mobilises material collected during a security conference in Israel, in which the close connections between private and public security actors were forged and where infrastructure was at the heart of the security concerns.

Introduction

> *"So, as we come out of the army, we're in life and death situations in the army, and we come out to the world, and we all believe that we could be the next Mark Zuckerberg, we are going into technology and come up with all these cool new start-ups"* (Avishai T, interview, Safe and Smart City Conference, 2018).

Amidst the Safe and Smart City Conference that took place in Jerusalem in November 2018, a former general in the Israeli Defense Forces (IDF) spoke about his experiences in the army and the booming private security industry in Israel. Based on first-hand qualitative material that we collected as participants of the conference and interviews we conducted, we aim to contribute to current debates in Critical Security Studies (CSS). In particular, we discuss the interaction between public and private actors within the field of security by highlighting the co-production of security concerns and expertise. Set up around the safety and security of urban environments in the twenty-first century, the Safe and Smart City Conference gathered European and Israeli policy leaders, security companies and representatives of public institutions such as local municipalities for an exchange of best practices in the Waldorf Astoria Hotel, Jerusalem.

Organised and financed by the European Network Elnet the aim was establishing and deepening exchanges on policy issues between Israeli and European policy makers, innovators and business leaders, the gathering in Jerusalem addressed security issues and challenges in and around cities. The conference programme comprised topics related to quality of life, the improvement of public services, the safety of sensitive infrastructures, and the vulnerability of intelligent systems under the overarching theme Better life, safer world and shared values. Those topics, approaches and the way they were discussed reveal the intricacies of contemporary security politics, especially with regard to the mutual constitution of shared assumptions and networks of expertise.

The concern regarding so-called critical infrastructure and the discussion of possible solutions to make infrastructure safer is shared by public and private security actors, not only in Israel. Infrastructures, the socio-material substrate of urban life, are at the heart of contemporary security considerations all over the world since their failure has proven fatal in case of natural disasters, terror attacks and other forms of breakdown (Lakoff and Collier, 2010). The issue of their security combines many topics that are increasingly of concern to policy makers, urban planners, public authorities and private actors. One crucial aspect in the provision of the security of infrastructure is the maintenance of forms of mobility, allowing for people, goods, resources and technologies to circulate without interruption while at the same time blocking 'dangerous' elements from the circulation. Seen from the perspective of enabling circulation as

sustaining everyday life, infrastructure protection has therefore gained much attention as one crucial aspect of urban security programmes.

The focus of this paper thus lies on the securitisation of infrastructure and the productive processes around the production of its criticality. We are interested in how infrastructures are rendered critical by ways of securitisation and how this process is (co-)productive of actors and the blurring of presumably clearvally defined fields of public and private. We aim to contribute to literature on public-private security interactions by proposing the notion of co-production as a conceptual frame to analyse the dynamics between public and private security actors in the process of securitising infrastructure. We also follow the distinction and denomination of public and private that has been proposed by the literature that explores these intersections (Abrahamsen and Williams, 2009). The public-private distinction seems more suitable than descriptions as 'commercial', 'economic' or 'state' actors as these characteristics do not apply for the diversity of actors that are at play.

Following the claim that security is not an objective reality but rather 'what actors make of it' (Buzan and Wæver, 2003: 48), this contribution accounts for the deeply intersubjective situatedness of security concerns and problems. By scrutinising the Safe and Smart City Conference in Jerusalem we hence explore a concrete and situated process in which security concerns are produced around the concern for urban security. Further, and in line with the constructivist approach towards security, we understand the expertise and experts that produce security concerns as equally 'produced' through these interactions. We underscore the relational understanding of securitisation processes (Langenohl, 2019) by bringing insights from the field of Science and Technology Studies (Jasanoff, 2004) into the (critical) study of security (see also: de Goede, 2018).

The paper proposes the concept of co-production to better understand why and how infrastructures are securitised and how this in turn produces the fields of private and public security actors. We approach the construction and provision of security not merely by looking at the cooperation between ostensibly separate public and private actors, but emphasise the mutual co-production across those spheres. We contend that the public and the private are not two realms that can be analysed apart from each other because infrastructure provision and infrastructure protection is not exclusively a public and/or private concern either. Rather, the invention, construction, maintenance and protection of infrastructures as critical is bound to the specific expertise of both public and private spheres. Moreover, public and private actors 'produce' critical infrastructure, but they are also a product of this process. They are constituted as public or private as they are addressed in these regards. As such, the process of rendering infrastructure critical is a twofold and thus productive process: by constructing infrastructure as endangered, threatened and thus potentially critical, the need for the expertise of these differing actors is produced, which in turn produces the need for their respective knowledge to protect the defined critical infrastructure.

The structure of the paper as follows: first we contextualise our paper in the existing debates in CSS and explain the gap we seek to fill by adding a co-production perspective. We then give a brief introduction into the fluidity between public and private actors and their cooperation in Israel in order to introduce the conference setting in which the research mostly took place, followed by an explanation of our methodological approach and our understanding of the research as 'focused ethnography'. In the empirical part, we discuss the concept of co-production and relate it to the field of public and private actors and their mutual co-production through and of critical infrastructure. We first discuss how security experts construct themselves in the process of securitising infrastructure. In a second step, we show how the production of (digital) critical infrastructure always entails the production of public and private actors. In conclusion, we discuss our findings and some questions that arise from the presented research.

The public-private divide and its limits: Commercialisation, privatisation and financialisation of security

A broad range of contributions to Critical Security Studies have analysed the complex ways in which security efforts depend on private actors, or how vital tasks within national security have been handed to private companies (Avant 2005; Krahmann 2008; Neocleous 2007; Leander 2005, 2010; Joachim and Schneiker, 2018). The study of private security actors thereby encompass a wide array of topics, such as the contribution of private security actors to the construction of (in)security and disastrous futures (Hoijtink, 2014), the fluid exchange of personnel between the military and private companies (Grassiani, 2018), or the enforcement of neoliberal governmentality by private security contractors (Leander and van Munster, 2007). The financialisation of security has been described for the field of financial security as banks act as security actors (Amicelle, 2011). Surveillance studies have also emphasised the close entanglements of state and private surveillance. David Lyon (2009) has described how state surveillance depends on market technology and Ben Hayes highlights new alliances between the state-surveillance and the military-industrial complex (Hayes, 2014). The empirical examples are thus diverse and recent developments even seem to indicate an intensification of these developments.

For Rita Abrahamsen and Anna Leander (2016), the expansion of private security has a number of reasons: Already with the advent of post-Fordism, partnerships between public and private actors and 'outsourcing' became a central feature of economic life. In addition, innovations in (military) technologies developed by private companies made them indispensable for these purposes. More generally, the dominance of neoliberal forms of government led the market to become a core focus of the governance of security. Private security actors are widely established and considered normal in the field of security. And they have increased in quantity. Recently, Elke Krahmann (2018) has pointed out that there are now nearly as many private security guards employed as public police forces in Europe, contributing to the perception that the EU and other political entities have failed as collective security communities. Similar observations have also been made for a range of other countries on all continents (Abrahamsen and Williams, 2009).

Regarding the sheer quantity of private security efforts, it is surprising that, analytically, they are still perceived differently from 'classical', meaning public security actors, such as the military or the police. We can find numerous accounts in which a mostly implicit assumption seems to be that security is better placed within the domain of the state, or at least that the state should hold the prerogative to decide how security is managed (Volinz, 2018). The provision of security is thus still portrayed as a primary task of the state as its original 'owner'.

The assumption that tasks of security have 'moved' from the state to private actors is also reflected in the concepts that are used to describe the interplay between public and private actors. While a number of scholars have employed the concept of assemblage to describe the heterogeneous parts and actors that come together in the provision of security (Abrahamsen and Williams, 2009; de Goede, 2012), others have used more processual concepts to describe security practices. Anna Leander (2010) has argued that the term privatisation has limitations, preferring the term commercialisation (or commodification, see Neocleous, 2007) as this highlights how these processes define security and how it is practiced within public and private institutions. However, concepts such as privatisation and commercialisation also rely on a stark division between the public and the private sphere and may even evoke such divisions.

Strict divisions of public and private actors within the field of security have been subject to criticism. Most outspokenly, Mark Neocleous is advocating a very different stance in his fundamental critique of security. He argues that privatisation does not adequately describe the changes that occur within the provision of security. He finds these assessments to reinforce

the division of state and capital that is based on liberal understandings of the state. He instead proposed a Marxist understanding that understands these forces to be unified in their 'obsession with security' (2007: 349). Acknowledging the role of security as 'the basis for both a sustained capital accumulation and a constant political policing of civil society' would allow to focus on the ongoing 'commodification of security' (Neocleous, 2007: 349).

We agree with Neocleous that the notion of privatisation is misleading inasmuch as it takes the state as a starting point of analysis and assumes that its responsibilities are increasingly taken over by private actors. However, this does not necessarily lead us to agree with Neocleous's Marxist understanding of state and capital as one unity and his conclusion to give up on the distinction between private and public altogether. Instead, we argue that we need to refine our understanding of the commonalities and contradictions of these entanglements between state and private actors. Hence, we explore the space between Neocleous's understanding of public and private efforts to be mutually following the 'fetish of security' on the one hand and studies that assume a fundamental distinction between the two spheres and their underlying aims on the other. Within the latter, it is often insinuated that security practices should lie with (or return to) the state because this would entail the provision of security as a public good and less as a commodity. Discussing the securitisation of infrastructures shows the broad space between these differing assessments, urging us to rethink them altogether with regard to digitalised infrastructures.

In proposing the concept of co-production for the study of public-private security interactions, we follow Abrahamsen and Williams (2009) understanding of the heterogeneous 'complex security networks that knit together public and private, global and local actors'. They argue that it is misleading to situate security actors in a zero-sum game of opposition to public power. While there is little doubt that private security may in certain settings be an indication of state weakness or pose a threat to the state, such interpretations overlook the manner in which the empowerment of private actors is directly linked to transformations inside the state and often takes place with the active endorsement and encouragement of state authorities. (6)

In line with their argument, Shir Hever has also argued that in the Israeli case,

> *"state officials promote the privatisation of security not just out of weakness, but for more complex reasons. There is a porous border between the state elites and the private sector elites, and those elites dealing with security can be considered as an elite group"* (2018: 14).

In our contribution we consider the interplay of public and private actors in the securitization of infrastructure within the Israeli context to be most instructive for the dynamics of co-production.

Critical infrastructure at the interstices of public and private security actors

The concept of critical infrastructure has received increased attention in CSS since the unfolding scholarly debates after 9/11 and the associated question of the vulnerability of infrastructure to breakdowns and terror. James Peter Burgess (2007) analyses European Strategies to protect critical infrastructure in response to 9/11 as well as the terror attacks in Madrid and London. He sees the criticality of infrastructure to be determined by its highly symbolic cultural and value. Collier and Lakoff (2010) highlight how the vulnerability of critical infrastructure has become an object of knowledge for security experts in the United States. They locate the US plans for the protection of critical infrastructure within a strategy that they call the 'political technology of preparedness' (2010: 244). Claudia Aradau (2010) gives space to the role of materiality in the securitisation of infrastructure. Her contribution is very helpful for our argument in two ways: First, she argues that labelling infrastructures as 'critical' for the purposes of protecting them against terrorist attacks is a securitising move (501). Second, by highlighting

how critical infrastructure materialises as a specific socio-material constellation that is produced through discourses and practices, Aradau implies, although with different intention, the productive force of infrastructure that materialises as critical.

In a more recent discussion on what makes critical infrastructure critical, Andreas Folkers (2018) notes that the provision of infrastructure has increasingly become a task that is shared between the state and private actors. However, since the 1990s the provision of infrastructure is not in the hands of a centralised actor or institution anymore but has diffused into a plurality of providers and operators. Further, Folker's contribution is important to our argument as it highlights that criticality is not an objective term but that every definition of criticality implies the attribution of value to specific infrastructures (2018: 124). Picking up on this argument, we will show that the question of what infrastructure is deemed critical is part of a complex process of political and social negotiations. Critical infrastructure is produced politically – and at the same time highly productive of political moments and modes of differentialisation. This means that – once rendered critical – infrastructure can turn into a site of producing difference by providing the means and justification for the channelling, sorting and separating of wanted and non-wanted mobilities.

Public–private fluidity in Israel

This paper derives its empirical material froma conference setting in Israel. Thus, it is worth to look at the Israeli security scene to understand the close ties that exist between the military and the private sector as a driving force of security policies, technologies and the international interest in learning from best practices in Israel (Machold, 2016).

Most Israeli men and women are conscripted to the Israeli Defense Forces (IDF) after finishing school. After completion of the mandatory service, Israelis stay closely associated with their former unit, while male soldiers might be called in for reserve duty once a year (Halper, 2015: 39). For many Israelis, an employment in the private security sector is very common either after finishing the mandatory army service or after retiring from a successful military career (Hever, 2018: 14). The start-up sector in Israel booms with new companies offering their service in the field of security (Hever, 2018: 155). Thus, coming from serving in the military for at least two or three years, oftentimes more, seeking employment or setting up companies in the vibrant security industry in Israel is a common step (mostly for men).

Trained by a public institution such as the IDF, those who transfer into the private security sector experience feelings of ambivalence throughout this process. As Grassiani has put it in her in-depth study of the self-perception of Israeli security experts, they are keen to emphasise their military past while at the same time differentiating themselves from the military by stressing their unique skills as security professionals (Grassiani, 2018: 84). However, these security professionals claim a great amount of legitimacy from their previous work and experience as soldiers, officers and generals in the IDF (Grassiani, 2018: 84). This is reflected in the global interest in Israeli security expertise (Graham and Baker, 2016: 50; Machold, 2016; Stockmarr, 2016: 61). As the statement from the CEO of a security company at the beginning of this paper indicates, former soldiers, working in the field of private security derive experience, dedication and legitimacy from their experience and the knowledge gained during their time as soldiers. They feel that they 'look at stuff in a very unique perspective' and have something to bring 'to the world economy and world in general'.

Moreover, the existing close links between the IDF and security professionals in the private sectors do not only work towards one side: the Israeli military also actively drives the development of security expertise and technology (Halper, 2015: 37). Private companies therefore research, develop and produce according to the (anticipated) demands of the military and even

with the mandate of the IDF to do so (Halper, 2015: 258). Thus, the limits and borders between Israeli army as a public institution and the countless private security firms are blurred in many ways. While many forms of cooperation of actors and interests exist in Israel itself, these developments are more recently 'being accompanied by policy interventions, including those of a specifically transnational character' (Machold, 2016: 4).

This development can be well observed with regard to the countless programmes that Israeli companies offer to a global audience within the field of urban security. Here, the idea of learning from Israel as a form of transnational policy learning has become increasingly salient as a strategy of contemporary urban security governance (Halper, 2015: 267; Machold, 2016: 13). Many programmes offer security solutions for urban environments, tailored to the needs of (aspiring) global cities in the Global West and South.

Part of this is the continuous marketing and promotion of the programmes and expertise to a global market. While being present at global security fairs, many Israeli companies have also developed other formats to market their expertise in homeland security into a commodity that can be adjusted and tailored to the needs of other cities (Halper, 2015: 269). In the following, we present an example of a conference which brings together European and Israeli policy makers, Israeli security companies and start-ups around the question of 'Safe and Smart Cities'.

Blurred lines at the smart and safe city conference

Safe & Smart City is the Premier Europe-Israel event gathering industry leaders, innovators and Policy Makers for crossover conversation, inspiration and business opportunities.

The third edition of the Conference Safe and Smart City is a scene where the blurring of the boundaries between public and private actors and institutions in the field of global security cooperation can be exemplarily observed. Based on previous exchanges, the atmosphere of the conference ranged between a conference, a security fair and an exchange of best practices between urban security experts and innovators. At times, the meeting reminded us of a gathering among old friends and led us to the understanding that many of the conference participants had known each other from before and other settings – or at least from the previous conferences that were held in Nice and Tel Aviv. The conference, as it seemed, was not intended to kick off a cooperation between the different fields of security industry and policy makers. Rather, it seemed as if it was celebrating and intensifying an already ongoing and vibrant cooperation to which new ideas, innovations and technologies were constantly added.

While there was a wide range of policy makers, military officials and security businesses present from the Israeli side, most of the international guests were policy makers, municipal representatives and MPs from France. Already at the opening of the meeting, it was mentioned that the French participants were eager to learn from Israeli security expertise and best practices. Stressing the experience with terrorism in urban centres in France such as in Paris (November, 2015) and Nice (July, 2016), many of the opening statements of the French participants suggested that Israeli and French security officials and companies were closely cooperating, for example 'to make Nice more safe'. Nir Barkat, then mayor of Jerusalem, introduced the city as one of the safest cities in the world, suggesting a 'civil' approach to urban security in which cities should not allow themselves to be turned into warzones through terror. Emphasising the close cooperation between the Jerusalem municipality, Israeli security companies and the city of Paris after the major attacks in 2016, Barkat was eager to portray Israel's – and here especially Jerusalem's – expertise in the management and containment of terrorist attacks.

Held at the prestigious Waldorf Astoria Hotel next to the Old City Walls of Jerusalem (and close to the Green Line that is still the internationally recognised border between a Jewish Israeli Jerusalem and an Arab-Palestinian Jerusalem), the conference started with an impressive Gala Dinner in the evening before the conference day. Providing for a five-star menu and free drinks for approximately 100 guests, we felt we were being allowed into a very intimidate circle of friends in which our existence was not questioned. Being openly asked about our interest and role in the conference, people would nod approvingly and suggest that universities should be much more involved in the issue of researching and providing security. This leads us to a reflection on our methodological approach to the conference setting, our participation in the conference as well as on our own position as researchers in the context of the conference.

Focused ethnography at a security conference

As officially registered participants of the conference, we employed the method of a 'focused ethnography' (Knoblauch, 2005) to collect our empirical material from which we derive our analysis. Following the 'focused ethnography' approach helped us to make sense of the conference as a field site that was not durable, stable and did not allow for extensive data collection. Conferences and gathering of professionals, as in their nature, are events that allow for a short and intensive immersion of the researcher into the field. They offer the perfect setting for a focused ethnography since, according to Knoblauch, 'focused ethnographies are short-ranged and not continual'. Fields visits are bounded and short-term engagements of the researcher with his/her field and 'they may even exist only in certain intervals, such as events' (Knoblauch, 2005).

Thus, for this paper, we take the conference in Jerusalem as a starting point for an explorative investigation of the contemporary security 'scene' in Israel and its attempts to translocalise its expertise and knowledge. Focusing on the exchange of knowledge, expertise and new technologies, our focused ethnography is characterised by a turn to 'structures and patterns of interaction' (Knoblauch, 2005). The intensity of data collection during these two days and the material at hand from the conference allows for an 'empirical orientation towards the details of social practice' (Knoblauch, 2005). Attending a conference of security practitioners and professionals, we entered a field of expertise that allowed for our presence and participation but nevertheless revealed the difference between the actor's interests in cooperation and our interest in the analysis of these forms of interaction. However, being familiar with the field of security, its terms and procedures, the focused ethnography, as opposed to other forms of observation, allowed for an intense immersion and participation in the activities, conversations and discussions of the conference during which we were approached as natural partners and colleagues rather than as strangers to the field.

Our interest in the production of critical infrastructure and the expertise around it allows for an analytical focus during the conference. We were able to follow the unfolding dynamics between private and public actors at the event and observe the ways of their interaction. Rather than assuming actors with fixed roles and interests at the conference and 'instead of imposing a pre-established grid of analysis upon these', we follow 'the actors in order to identify the manner in which these define and associate the different elements by which they build and explain their world' (Callon, 1984: 201). This allows for an open-ended investigation into the processes of cooperation and co-constitution in the field of security practice, attending to 'the actors and explain how they define their respective identities, their mutual margins of manoeuvre and the range of choices which are open to them' (201). As such, the conference enabled and created specific constellations and roles which bridge forms of social cooperation and forms of security

cooperation. Herein we found ourselves within exactly those social interactions that were intended to initiate the very cooperations and processes of co-production that our research was interested in researching.

During the conference, we attended panels that raised different topics and featured different fields of expertise and we were able to 'book' appointments with specific experts in allocated time slots, thus enabling a way to deepen the conversation and explain our interest openly. In this way, we interacted with some of the conference participants in a very formal setting in which we gathered first-hand insights and materials from security practitioners. We conducted around ten 30–45 min individual interviews in which we sat with the security experts and followed up on what they had mentioned on stage, recording the interview upon approval of the interlocutor.

Our open questions covered the personal background of the expert, his (in this case only his) career path and assessment of the Israeli security scene. Further, we asked more specific questions on the role of infrastructure for security considerations, on solutions offered from the respective company and the technologies at hand in order to provide these solutions. All interlocutors were very open to our interest and willingly answered our questions. Thus, we were able to enter a positionality at the conference that allowed us to articulate our research interests, in accordance with the conference's official aim to serve as a hub for security related knowledge.

The co-production of critical infrastructure and expertise: Securitising infrastructure(s)

Panels and expert talks at the conference circled around the notion of critical infrastructure, its assessment and the presentation of technologies invented to protect infrastructures. The promotion of other forms of 'securitising infrastructures', namely technologies developed in order to secure infrastructural arrangements, included drones, sensors and smart applications. Asked what makes an infrastructure critical in the first place, Tomer Avishai (name changed), an Israeli security official we interviewed, was quick to explain that every infrastructure has the potential to be or become critical. Mentioning that infrastructure can face two forms of threats, he explained that internal threats stem from the infrastructure itself, while external threats are something that is done to the infrastructure from outside.

His distinction between the internal and external threats faced by infrastructure points to the complexity of infrastructures as socio-material arrangements that are neither purely technologically driven nor solely based on or managed by human control. Any attempt trying to grasp what infrastructure is has to come to terms with the fact that infrastructures evade a clearly bounded definition. This said, any definition may start with understanding infrastructures as 'extended material assemblages that generate effects and structure social relations, either engineered (i.e. planned and purposefully crafted) or non-engineered (i.e. unplanned and emergent) activities' (Harvey, Bruun Jensen, and Morita, 2017: 5). As such, they 'are doubly relational due to their simultaneous internal multiplicity and their connective capacities outwards' (5).

However, constructing infrastructures as vulnerable in their nearly perfect functionality, entails a specific bias of the imagination of infrastructures itself. Historically and conceptually, infrastructure entail a highly modernist notion in which the working of infrastructure is strongly associated with a state's and society's self-narration as inherently functional and modern (Nolte and Özdemir, 2018: 8). The construction of infrastructure as vulnerable has thus tied to a modernist bias in which the threat to a specific infrastructure is constructed as threatening the state and society as such.

This modernist imagination of infrastructure is thus prone to the threats that Tomer Avishai had mentioned to us during the conference. As the material enablers of forms of circulation, such as information, resources and goods, but also the mobility of people and things, infrastructure is imagined and constructed as functioning smoothly to enable modern everyday life. As a result of this understanding of infrastructure as vital systems that keep society going, the maintenance and security of these systems has taken centre stage in the contemporary security field. Since the 'growing dependence of citizens on centrally provided infrastructure services corresponds to the growing capacities of states and large corporations to provide vital services to the networked population' (Folkers, 2017: 858), the potential vulnerability of infrastructure has become a field in which concerns and calls to action for the security of infrastructure proliferate.

The complexity of infrastructure and its potential to become constructed as critical is thus twofold: On the one hand, their multiplicity relates to what the Tomer Avishai has labelled 'internal threats'. This means that the material form of the infrastructure, its technical setup or some of the flows it provides may become dangerous to the infrastructure itself. On the other hand, an infrastructure's 'connective capacities outwards' relate to what he mentioned about the external threats to infrastructure. This implies one infrastructure's capacity to affect the working of other infrastructures and keep them from functioning or stop them from working. This again would result in cascading effects of failing infrastructures in which entire cities or states could face infrastructural breakdowns, potentially resulting in chaos, the spread of diseases, economic crisis and political turmoil. With catastrophic scenarios of entire cities or states collapsing due to infrastructural breakdowns, 'infrastructures- and in particular connected nodes- are now seen as fragile and vulnerable to threats coming from ever-expanding list (sic!) of outside threats- terrorists, hackers, ecosaboteurs, bored kids and revolutionaries' (Wakefield, 2018: 4).

Not every infrastructure is in itself critical since 'criticality is not an ontological assertion. Infrastructures cannot be critical as such, but only in relation to something that is depending on them' (Engels, 2018: 15). Critical infrastructure, thus, is the outcome of a process in which some infrastructures get to be produced as critical vis-à-vis specific assessments of its vulnerability – and its assigned value for a nation's or population's survival. When Tomer Avishai mentioned to us during the conference that every infrastructure has the potential to become critical, he himself pointed to the process of securitising infrastructure. This implies, according to CSS, that an infrastructure's criticality evolves as the outcome of security discourses and practices. Conferences, such as the one focused on in this paper, form part of these broader discourses. In this process of production, only some infrastructures materialise as 'infrastructures to be protected at the national level' while at the same time 'other materialities are relegated outside the purview of government' (Aradau, 2010: 508).

The production of critical infrastructure is thus a 'securitizing move', these infrastructures are perceived as threatened and thus in need of special protection. However, not only does critical infrastructure evolve as the product of expert discourses, forms and problematisations. Infrastructure, once produced as critical, is 'productive' as well: it produces its own experts, threats and may bring about effects that are not intended in its production but may still result from it.

Co-production – conceptualising dynamics and interconnections

We take co-production as a concept and approach from Science and Technology Studies (STS) in which it has proven helpful to study the ways in which technology and society are mutually constitutive and do not precede or exclude one another. As one of the most prominent

advocates of the co-production approach, Sheila Jasanoff suggests that the idiom of co-production offers new ways of thinking about power, highlighting the often invisible role of knowledges, expertise, technical practices and material objects in shaping, sustaining, subverting or transforming relations of authority. To sociologists and social theorists, the co-production framework presents more varied and dynamic ways of conceptualizing social structures and categories, stressing the interconnections between the macro and the micro, between emergence and stabilization, and between knowledge and practice (Jasanoff, 2004: 4).

The relational aspect of political and social processes and the empirical orientation of the co-production idiom as part of STS (Harbers, 2005: 262) makes co-production a fruitful concept to frame the empirical findings for this paper. It is helpful to analytically frame how the actors at the conference did not only refer to one another, their interests or any technological solutions, but to account for the ways in which they mutually produced each other in their positionality within the public and the private sphere. Within their interactions, they also co-produce the very socio-technical security problems that they suggested to just wanting to solve.

In one of the latest contributions to make the co-production idiom fruitful for studies in International Relations (IR), Lindskov Jacobsen and Monsees introduce a very helpful understanding of co-production in its twofold process. They suggest studying the production of technology and the production by technology (Lindskov and Monsees, 2019: 26). With the production of technology they focus on the analysis of the various social practices and discourses that contribute to the social production of scientific facts and technological authority (27). The perspective on the social production by technology looks into the agentic capacity of technology itself. According to them, such an analysis highlights 'how sociotechnical formations loop back to change the very terms in which we human beings think about ourselves and our positions in the world' (Lindskov and Monsees, 2019: 29).

Going back to our material with a focus on the co-production idiom then means to trace moments and expressions in which identities, problems and their solutions are produced and how the agency of entities, be it human or non-human ones, is an outcome of social practices and processes (Lindskov and Monsees, 2019: 36). Lior Weiss (name changed), another security expert attending the conference, opened his laptop during our interview and presented his computer-based simulation to us. In this simulation, Weiss and his colleagues are able to model and visualise any possible catastrophic scenario in any possible city worldwide. Taking the observer through a vivid journey of skyscrapers, malls, concert halls and stadiums, Weiss can pause the simulation at any time and visualise any kind of threat that is not yet in the scenario but might possibly evolve. Instantly, Weiss can put up explosives next to a metro station, place snipers on rooftops or simulate movement next to a fully booked soccer stadium, being able to exactly measure the distance between possible perpetrator, threat and victims. Through this, the initially unharmed urban environment turns into a map of possible threats in which every urban infrastructure has the potential to become a site of attack and devastation.

As the simulation illustrates our case that not every infrastructure is critical but can be securitised and, in this way, determined to be critical. By helping possible customers to imagine a city as a cartography of possible threats that have not yet materialised, the 3D pictures of companies such as the one from Lior Weiss are virtually turning ordinary infrastructures into sites of destruction, rendering them visible as vulnerable spots that warrant protection. This materialisation of infrastructure as 'critical' in turn requires a specific expertise to accompany the process of its securitisation. The assessments of security experts who imagine and simulate potential threats are themselves 'generative of policy problems' (Machold, 2016: 14). They create the catastrophic imaginaries to which they then deliver their possible solutions.

The expertise and knowledge presented at the conference 'should not be understood as a resolution to a pre-given set of problems (technical, political or otherwise), but rather as a kind

of policy diagnostic, which enacts realities that it claims to only describe and respond to' (id.). In co-production terms this entails to understand how critical infrastructure is produced as technology under threat. At the same time, the infrastructure that evolves as threatened in front of our eyes becomes productive in a sense that it requires further expertise, knowledge and technologies to be assembled in order to be secured. The need for expertise and technology is inflated by technology itself.

Teaching what's critical – the (co-)production of public and private expertise

The experts have to do the teaching to the municipalities. This (teaching) should come from the industry, the companies. Sometimes we (the industry) have to force them, to teach them and bring professional companies in order to bring partners for a solution. First, we begin with education of the municipality and also the cities (…) They have to put people in charge. Then we begin the implementation of the system and action, depending on defining what infrastructure is critical.

By mentioning the role of private security companies in the process of 'teaching' municipalities and other state bodies about their potentially critical infrastructure, Itai Davidi (name changed) describes two entangled notions of the co-construction perspective: first, his statement clearly indicates the process-character of producing infrastructure as critical. By mentioning that the implementation of any system of action depends on what infrastructure gets to be defined as critical, Davidi points to the productivity of this process: As security companies are not only providing the solutions to existing problems but are productive of the problems that they then offer solutions for, these companies are part of producing critical infrastructure.

Second, Davidi's statement reflects the that the role of private security companies is far from providing solutions to a domain in which the state defines and controls matters of security. According to Davidi, private security firms take initiative and even force municipalities to understand and learn about their potentially critical infrastructure. As a result of this interaction, private and public security actors become constituted. They are attributed certain knowledge and certain tasks. They are not separate entities that pre-exist to their actions but rather come into being through these actions.

Thus, in line with our co-production argument, what we find in the material is that private and public actors are mutually constitutive: in many forms of cooperation, actors relate to each other and the other's potential interests, thereby producing the demands they then willingly serve. At the conference, a conversation with two security professionals illustrates this relation very vividly. Both male professionals had left the military after completing over 20 years of service in the ranks of colonel and major. From their long experience in the army, they had developed a very clear sense of the demands that the military directs at the private sector. Asked what drives their work and the development of security technology, in this case drones, they responded:

> *"It's coming from needs. I'm coming from the air force and I used to fly UAV [unpiloted aerial vehicle]. And he [points to his colleague] is coming from other fields of the army, intelligence for example. So after all, the military have their needs, they want very small things, very smart things, very fast. (…) They just prefer to buy. The Israeli army is buying. It's not developing. Look, in Israel there is a lot of industry (…) the army is saying: why should I be a manufacturer? (..) In the end of the day, the price is gonna be cheaper. After we develop for the army or the police system we realise that a lot of inquiries [come] from other sections."*

This statement provides insights into the close entanglements, even forms of dependencies, that take shape in forms of cooperation between public and private actors. Israeli security professionals who had previously served in the army and are now working in the private sector

know exactly the needs and demands of the public sector. They specifically develop and manufacture their products for the public sector, the Israeli Defense Forces in this case. As such, private security firms do not only function as service providers to the defined security challenges of public institutions nor do they just assess and define risks and threats. They literally produce what they anticipate the public sector to be wanting. This form of co-construction is not the result of a problem that the state and its different actors define in order to seek help in the private sector. Instead, problematisations of public security derive from interactions between firms and authorities in which what counts as 'public' becomes constituted in the first place.

The co-production of security for digital infrastructures

The close relations between the Israeli military and the country's economy have lately gained increased prominence with regard to one specific field – cyber security. It was a common sense at the conference that this field will gain importance in the near future, and Israel was portrayed as being at the forefront of this development. The country is already seen as one of the main drivers of cyber security advancement. The reason for this is, again, the close cooperation of the Israeli military and private sector. The most prominent example is Unit 8200 within the IDF which is surrounded by rumours and stories on its covert activities. The unit has attracted attention for its secretmilitary operations, but also for its transfer of knowledge into the private sector as its former members regularly leave the IDF to start their own business, many in the field of cyber security (Reed, 2015). For example, the Financial Times has described the unit as 'the Israeli military's legendary high-tech spy agency, considered by intelligence analysts to be one of the most formidable of its kind in the world', adding an expert statement that describes the country's efforts within the field as existential, 'Israel needs to be excellent in cyber. We are getting attacked again and again – our banks, our critical infrastructure, our government'.

These motives have also been reiterated by an interviewee at the conference who works within the cyber-security domain. Parts of his statement have been used in the introductory quote. The following provides the broader context in which he relates the military experience to the way how security as well as economic problems are tackled:

> *"Being Israeli and surrounded with Arab nations, partly enemies, we're always kind of thinking ahead. We're very proactive, trying to figure out what's gonna happen next. How can I know if that happens, what should I do? We're kind of building these defences and thinking…We think proactively and we're ahead, we're risk takers. (…) Just living in Israel, that's what it does to you."*

This quote speaks to a number of aspects that indicate how strongly experiences within the public and private realm are connected within the Israeli context. The interviewee connects the military experience to a specific attitude of the Israeli security culture which is seen to enable them to thrive in the business world. He implies that it would be a similar kind of risk-taking attitude that would enable former Israeli soldiers to thrive in the business environment – coming out of the army would enable them to become the 'next Mark Zuckerberg'.

The field of digital infrastructure security presents a most interesting case to assess the intersections of public and private efforts in the securitisation of infrastructure. Unlike in other infrastructural domains, within the digital sphere the provision of security has not been handed from public to private actors because 'cyber security' has hardly ever been a domain of the state. The provision of cyber security appears to be a constant struggle between public and private actors, more precisely: it appears as a symbiosis of both, a very concrete case of co-produc-

tion. As indicated above, speaking of 'commercialization' of digital security would be misleading as private actors originally developed many security practices while state actors have only been adapting them.

Although public authorities and security forces have been 'catching up' in many regards, private actors develop and maintain most digital infrastructures. They provide expertise and methodologies that define possibilities and threats. As this field of security has gained growing attention within the last years, the state has also increasingly sought to expand its capabilities. Attempts to 'securitize' the topic include a number of referent objects: threats to private companies, to citizens and their privacy, and also to nation states. Already in 1998, there have been attempts by the military to securitise the cyber and thereby claim authority to oversee this sphere (Buzan, Wæver, and de Wilde, 1998). While these aspirations were not fulfilled at that time, discourses concerning 'cyberspace' are filled with attempts to frame and highlight certain threats and future risks. Hence, a number of actors compete in their demands aiming to define and defend cyber-security (Balzacq, Leonard, and Ruzicka, 2016).

While initially enthusiasm of the possibilities of the data superhighway prevailed, it became a concern of the military and intelligence sector due its lack of (state) control. The political emphasis shifted from how to build and expand the digital infrastructure towards questions on how it should be secured (Schulze, 2017). Such concerns included the two facets securing infrastructures that have been introduced above: the security of the cyber as well as security through cyber (Betz and Stevens, 2013). Considering the close entanglements of public and private efforts in the development of digital infrastructure, it can be described as a co-production while the product itself, the global digital infrastructure, challenges notions public and private. Cyber-security thus unites a range of at least partly paradoxical demands and thereby constitutes a reference object which Marieke de Goede and Stephanie Simon have described as 'unmappable in its entirety and unknowable in its essence' (2015: 89). As a consequence, cyber-security itself presents a means to address these manifold claims. Tim Stevens (2016: 2) explains, 'cyber security is a response to the perceived risks and threats of the modern, global information-technological infrastructure most commonly glossed as 'the internet'. In broad terms, it is concerned with anyone and anything that communicates through digital, electronic means'.

Unsurprisingly, the provision of this world-wide communications infrastructure has also been characterised as 'critical'. In Israel, the Security in Public Bodies Law of 1998 gave public bodies increased authority of supervision. Remarkably, the regulation of public bodies includes over a dozen of public and civilian organisations as well as firms (Tabansky: 2013). Acknowledging these entanglements, we can understand public demand for security and economic logics as constitutive for each other within the digital sphere. However, the interactions of public and private actors may have controversial effects. Some software companies also have the ability to do offensive cybersecurity, meaning the skills to enact surveillance via digital devices. An Israeli company that is tightly linked to the above-mentioned Unit 8200 has been accused of helping authoritarian governments to hack phones of journalists and human rights workers (Timber and Greene, 2019). The complex dynamics between differing states, their authorities, private companies and civil society within the field of cyber security have become a topic of ongoing public discussions within the last years, most certainly after the Snowden revelations (Bauman et al., 2014). While state actors rely on private services in their surveillance of large parts of online communication, they also exploit weaknesses in these private security architectures to enable targeted operations. These constellations show that both state and private actors play ambiguous roles within the field of cyber (in-)security.

Conclusion

This contribution has put forward the concept of co-production to account for the close entanglements of public and private actors within the sphere of infrastructural security. As our empirical insights have shown, the lines between the sectors at times blur, they are constantly renegotiated and re-drawn. Actors change sides and seamlessly take on new roles within the public as well as within the private realm. The securitisation of infrastructure appears as a joint public-private endeavour in which both sides fulfil specific tasks and direct expectations and demands towards the other. However, the distinction between the public and the private cannot be overruled altogether as Neocleous (2007) suggests. Rather, we need to better account for the varying dynamics that are engendered by these forms of co-production as well as possible contradictions.

Although public-private cooperation and co-constitution are driving forces within the field of infrastructural security, it would be misleading to assume an uncontested alliance. Reclaiming the dividing line between both fields can be constitutive of agency on both sides. While state actors may demand efficiency and innovation from the private sphere, the private sphere expects the state to provide the frameworks to conduct business. As indicated above, such attributions depend on the liberal division of state and market which has been re-affirmed within securitisation theory which sees the economy as a possible referent object, but less as an actor within securitisation itself (Buzan, Wæver, and de Wilde, 1998). Our findings suggests that research into securitisation needs to take seriously the effects that stem from this division in the first place, not in order to disregard it altogether, but to understand the political implications that are engendered by these seemingly unpolitical sites of securitisation. Such an approach would take seriously the political economy of securitization and underscore that there is no such thing as depoliticised security.

As the empirical insights have shown, distinctions between the two spheres are drawn by actors themselves and have an enabling effect. This is the case for those security professionals who are leaving the public sector in order to develop surveillance technologies. As former employees of the state, they have in-depth knowledge of the needs, standards and challenges of the public sector when it comes to issues of security provision. On the other hand, the public sector, in its multiplicity from the national to the regional and local level, is in need of sources of security provision amidst an ever-increasing broadening of security concerns. This is especially the case with regards to critical infrastructure since ‘the potentially wide-range of civilian-infrastructure which might be deemed ‘critical (…) signifies a move towards a much broader national security paradigm’ (Steele, Hussey, and Dovers, 2017: 79).

However, there are also differences between the two spheres that cannot be described as co-productive or mutually reinforcing. For example, the public and private field have very different forms of accountability. Generally speaking, in economically developed states, companies have to satisfy investors whereas public actors can be held responsible in differing forms if their form of government implies division of power. Also, depending on the institution and scale of its responsibilities, the state and its agencies might take much longer to not only plan, but also democratically legitimate specific projects.

In addition, contradictions can appear not only between private and public actors, but also between and across different state actors as well as between private actors. By discussing the interactions between public and state actors, we do not want to suggest that these fields can be treated as homogeneous entities. As the state cannot be grasped as one actor, let alone as a single entity with one will, diverging interests can occur in which contradictions and frictions become visible. From the national to the local level, political administration and responsibility are scattered and shared between different state agencies to which different tasks can be assigned. Infrastructure investment, let alone infrastructure maintenance, remains a blurry

field of shared responsibilities of different actors. The same applies for the private sector which is even more heterogenous and diversified in small companies and international cooperation with very different forms of governance, labour, governance and organisation.

Throughout this paper, we suggested that the distinction between public and private actors as two separate and distinct entities engaging in security practices should be subject to intensified scholarly scrutiny. Rather, their relation should be analysed as potentially co-productive, shaping their identities and interests in processes of securitisation. The co-production perspective might thus be fruitful to study the complex and entangled processes in the field of security. Especially for those interested in the entanglement of expertise, materialities and technologies, a co-production perspective offers conceptual and methodological tools for further research.

Acknowledgements

The authors would like to thank the two anonymous reviewers for their instructive comments. This paper has also greatly benefitted from Andreas Langenohl's most helpful comments and Johannes Gunesch's valuable feedback and careful reading. Amina Nolte's research was carried out within the collaborative research centre 'Dynamics of Security' /Transregio 138 at the Justus Liebig University Giessen and Philipps University Marburg. Carola Westermeier's work was carried out in the framework of the research project 'FOLLOW: Following the Money from Transaction to Trial'.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

Carola Westermeier's work was carried out in the framework of the research project 'FOLLOW: Following the Money from Transaction to Trial', funded by the European Research Council, Grant No. ERC-2015-CoG 682317.

References

Abrahamsen R and Leander A (2016) Introduction. In: Abrahamsen R and Leander A (eds.) *Handbook of Private Security*. London: Routledge, 1–8.

Abrahamsen R and Williams MC (2009) Security Beyond the State: Global Security Assemblages in International Politics. *International Political Sociology* 3 (1): 1–17.

Amicelle A (2011) Towards a 'New' Political Anatomy of Financial Surveillance. *Security Dialogue* 42 (2): 161–178.

Aradau C (2010) Security That Matters: Critical Infrastructure and Objects of Protection. *Security Dialogue* 41 (5): 491–514.

Avant D (2005) Private Security Companies. *New Political Economy* 10 (1): 121–131.

Balzacq et al. (2016) 'Securitization' Revisited: Theory and Cases. *International Relations* 30 (4): 494–531.

Bauman et al. (2014) After Snowden: Rethinking the Impact of Surveillance. *International Political Sociology* 8 (2): 121–144.

Betz, David J, and Stevens T (2013) Analogical Reasoning and Cyber Security. *Security Dialogue* 44 (2): 147–164.

Burgess, Peter J (2007) Social Values and Material Threat: The European Programme for Critical Infrastructure Protection. *International Journal of Critical Infrastructures* 3 (3/4): 471–487.

Buzan, Barry and Wæver O (2003) *Regions and Powers. The Structure of International Security.* Cambridge: Cambridge University Press.

Buzan, Barry, Wæver O, and de Wilde J (1998) *Security: A New Framework for Analysis*. Boulder: Lynne Rienner.

Callon, M (1984) Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay. *The Sociological Review* 32 (1): 196–233.

Collier, Stephen J and Lakoff A (2010) Infrastructure and Event. The Political Technology of Preparedness. In: Braun B and Whatmore S (Eds.) *Political matter. Technoscience, democracy, and public life*. Minneapolis: University of Minnesota Press.

de Goede M (2012) *Speculative Security: The Politics of Pursuing Terrorist Monies.* Minneapolis: University of Minnesota Press.

de Goede, M (2018) The Chain of Security. *Review of International Studies* 44 (1): 24–42.

Engels JI (2018) *Key Concepts for Critical Infrastructure Research.* Wiesbaden: Springer Fachmedien.

Folkers A (2018) Was ist kritisch an Kritischer Infrastruktur? Kriegswichtigkeit, Lebenswichtigkeit, Systemwichtigkeit und die Infrastrukturen der Kritik. In: Jens-Ivo E and Nordmann A (eds.) *Was heißt Kritikalität? Zu einem Schlüsselbegriff der Debatte um Kritische Infrastrukturen*. Bielefeld: Transcript, 123–154.

Graham S and Baker A (2016) Laboratories of Pacification and Permanent War: Israeli-US Collaboration in the Global Making of Policing. In: Hönke J and Müller MM (eds.) *The Global Making of Policing: Postcolonial Perspectives*. London: Routledge, 40–58.

Grassiani E (2018) Between Security and Military Identities. The Case of Israeli Security Experts. *Security Dialogue* 49 (1-2): 83–95.

Halper J (2015) *War Against the People: Israel, the Palestinians and Global Pacification.* London: PlutoPress.

Harbers H (2005) Epilogue: Political Materials – Material Politics. In: Harbers H (ed.) *Inside the Politics of Technology. Agency and Normativity in the Co-Production of Technology and Society*. Amsterdam: University Press, 257–272.

Harvey P, Bruun Jensen C and Morita A (2017) *Infrastructures and Social Complexity: A Companion*. London: Routledge/Taylor & Francis Group.

Hayes B (2014) The Surveillance-Industrial Complex. In: Ball K, Haggerty KD and Lyon D (Eds.) *Routledge Handbook of Surveillance Studies. Routledge International Handbooks*. Abingdon: Routledge, 167–175.

Hever S (2018) *The Privatization of Israeli Security.* London: Pluto Press.

Hoijtink M (2014) Capitalizing on Emergence: The 'New' Civil Security Market in Europe. *Security Dialogue* 45 (5): 458–475.

Jasanoff S (2004) Ordering Knowledge, Ordering Society. In: Jasanoff S (ed.) *States of Knowledge: The Co- Production of Science and Social Order.* New York: Routledge, 13–45.
Joachim JM and Schneiker A (2018) *Private Security and Identity Politics: Ethical Hero Warriors, Professional Managers and New Humanitarians.* Routledge Private Security Studies. London: Routledge/Taylor & Francis Group.
Knoblauch H (2005) Focused Ethnography. *Forum Qualitative Research* 6(3).
Krahmann E (2008) Security: Collective Good or Commodity? *European Journal of International Relations* 14(3): 379–404.
Krahmann E (2018) The Market for Ontological Security. *European Security* 27(3): 356–373.
Lakoff A and Collier S (2010) Infrastructure and Event. The Political Technology of Preparedness. In: Braun B and Whatmore SJ (Eds.) *Political Matter: Technoscience, Democracy, and Public Life*. Minneapolis: University of Minnesota Press, 243–266.
Langenohl A (2019) Dynamics of Power in Securitization: Towards a Relational Understanding. In: Langenohl A and Kreide R (Eds.) *The Power Dynamics of Securitization: From the Early Modern Period until the Present.* Baden-Baden: Nomos Verl.-Ges, 19–55.
Leander A (2005) The Market for Force and Public Security: The Destabilizing Consequences of Private Military Companies. *Journal of Peace Research* 42(5): 605–622.
Leander Anna (2010) Commercial Security Practices. In: Burgess JP *The Routledge Handbook of New Security Studies. Routledge Handbooks*. London: Routledge, 208–216.
Leander A and van Munster E (2007) Private Security Contractors in the Debate About Darfur: Reflecting and Reinforcing Neo-Liberal Governmentality. *International Relations* 21(2): 201–216.
Lindskov JK and Monsees L (2019) Co-Production: The Study of Pro*ductive Processes at the Level of Materiality and Discourse. In: Leese M and Hoijtnik M Technology and Agency in International Relations*. London: Routledge, 24–41.
Lyon D (2009) *Surveillance, Power, and Everyday Life.* Oxford: University Press.
Machold R (2016) Learning From Israel? '26/11' and the Anti-Politics of Urban Security Governance. *Security Dialogue* 47(4): 275–291.
Neocleous M (2007) Security, Commodity, Fetishism. *Critique* 35(3): 339–355.
Nolte A and Özdemir E (2018) Infrastructuring Geographies: Histories and Presents in and of the Middle East and North Africa. *META – Middle East – Topics & Arguments* 10: 5–20.
Reed J (2015) Unit 8200: Israel's Cyber Spy Agency. *Financial Times,* 10 July. Available at: https://www.ft.com/content/69f150da-25b8-11e5-bd83-71cb60e8f08c. (accessed 18 October 2023).
Schulze M (2017) *From Cyber-Utopia to Cyber-War. Normative Change in Cyberspace.* Unpublished PhD thesis, Friedrich-Schiller-Universität Jena.
Simon S and de Goede M (2015) Cybersecurity, Bureaucratic Vitalism and European Emergency. *Theory, Culture & Society* 32(2): 79–106.
Steele W, Hussey K and Dovers S (2017) What's Critical About Critical Infrastructure?. *Urban Policy and Research* 35(1): 74–86.
Stevens T (2016) *Cyber Security and the Politics of Time.* Cambridge: Cambridge University Press.
Stockmarr L (2016) Beyond the Laboratory Thesis: Gaza as Transmission Belt for War and Security Technology. In: Hönke J and Müller MM (Eds.) *The Global Making of Policing: Postcolonial Perspectives*. London: Routledge, 59–76.
Tabansky L (2013) Critical Infrastructure Protection. *International Journal of Cyber Warfare and Terrorism* 3(3): 80–87.
Timber C and Greene J (2019) WhatsApp Accuses Israeli Firm of Helping Governments Hack Phones of Journalists, Human Rights Workers, *The Washington Post*, 29 October. Available at: https://www.washingtonpost.com/technology/2019/10/29/whatsapp-accuses-israeli-firm-helpinggovernments-hack-phones-journalists-human-rights-workers/. (accessed 18 October 2023).
Volinz L (2018) Governance Through Pluralization. Jerusalem's Modular Security Provision. *Security Dialogue* 49(6): 438–456.

Wakefield S (2018) Infrastructures of Liberal Life: From Modernity and Progress to Resilience and Ruins. *Geography Compass* 12(7): 1–14.

Interviews cited

Davidi I. Name changed. Personal Interview. Safe and Smart City Conference Jerusalem, 19 November 2018.
Tomer A. Name changed. Personal Interview. Safe and Smart City Conference Jerusalem, 19 November 2018.
Weiss L. Name changed. Personal Interview. Safe and Smart City Conference Jerusalem, 19 November 2018.

E Global aspirations and local (dis-)connections: A critical comparative perspective on tramway projects in Casablanca and Jerusalem

Co-author: Raffael Beier, Institute of Development Research and Development Policy, Ruhr University Bochum, Germany

Published in: *Political Geography* 78 (2020), p. 102–123.
DOI: 10.1016/j.polgeo.2019.102123

Abstract

This article puts emphasis on the political representation of tramway projects in Casablanca, Morocco, and Jerusalem, Israel/the Palestinian territories. In this paper, we discuss both tramway projects as flagships of national worlding strategies that try to promote the respective city on global markets of attention, competing for international investors and tourists. As such, they are majorly driven by national political interests, fostering the hegemonic position of the central state in cooperation with private actors. The tramways are aimed at portraying modernity as well as political and economic stability, while aspiring to a supposed international urban world-class. At the same time, governments frame tramways as tools to promote socio-urban integration and to improve local transport systems. However, the paper shows that although governments are eager to stress the integrative role of tramways, they continue with violent politics of urban exclusion at the same time. Thus, the integrative wording behind tramway planning has to be understood against political (and economic) pressures to regain political legitimacy in a moment of crisis - both domestically and internationally. Consequently, the paper uses interview data and applies methods of discourse analysis to shed light on the worlding of tramways and its ambivalent practices of symbolic inclusion and exclusion.

Key words: Infrastructure; worlding; hegemony; state; representation; global; Jerusalem

1. Introduction

Public transportation infrastructure is one of the key challenges of urban policies in many emerging cities worldwide. Traffic congestion, air pollution and increasing socio-spatial segregation have pushed local governments to plan for the development of new bus rapid transit (BRT), metro or tramway lines (Dimitriou, 2011). Infrastructure as a concept is at the heart of urban studies. As a bundle of materially networked socio-technical processes, infrastructure systems mediate and enable flows and link “practices of production with systems and practices of consumption” (Graham and Marvin, 2001: 11). They are the capital on and through which cities thrive and the means through which more economic, political and cultural capital is accumulated. However, much urban theorists and critical ethnographers have challenged the notion of infrastructure as naturally binding and integrative element of cities (cf. Baumann, 2018; Graham and Marvin, 2001; Graham and McFarlane, 2015; Nolte, 2016; Salamanca, 2015). Infrastructures are “sociotechnical geometries of power” (Graham and Marvin, 2001: 11) and always already “securitised, militarised, splintered and privatised.” (Graham and McFarlane, 2015: 3) when they materialise in their respective local contexts. Infrastructure has become a “political terrain” (Von Schnitzler, 2016: 12) on and through which struggles around belonging and non-belonging in the city are articulated.

Discussing two case studies of tramways in Casablanca and Jerusalem, this paper aims to conceptually and empirically contribute to the debate about the political notion of public transport infrastructure (Graham, 2009a; McFarlane and Rutherford, 2008; Nolte, 2016; Rokem and Vaughan, 2018) within the wider field of ordinary urban geopolitics (Rokem et al., 2017). However, while Rokem and Vaughan (2018) have stressed the ability of transportation infrastructure to connect a city across ethnic segregation and to foster encounters between different groups, the following analysis rather reveals the opposite. Selective integration through transportation infrastructure rather challenges the “importance of connectivity as an issue of spatial and social justice” (Rokem and Vaughan, 2018: 23) and a detailed analysis should include a careful analysis on the political context in which this connectivity is embedded.

With the aim of stressing the representational notion of infrastructure, this paper links the debate on the politics of infrastructure (Anand, 2015; Larkin, 2013; Nolte and Yacobi, 2015; Young and Keil, 2010) with the are worlded by means of representing and narrating different

forms of infrastructure development. Further, we argue that these worlding practices, through the representation of infrastructural megaprojects, serve as modes of distinction. National regimes, aiming at placing their capital cities at the forefront of the global competition for attracting capital, creative industry and tourism, turn to infrastructure in order to narrate themselves as "modern", "creative" and "inclusive". Through large-scale infrastructure investment, they seek political legitimacy as well as distinction from other cities in the region and worldwide and aim at enhancing their global reputation (Beier, 2019a). However, as the paper shows, the intention of representing cities as inclusive, creative and sustainable by means of infrastructural upgrade often comes at the expense of a careful assessment of local contexts and the needs of specific urban populations.

More specifically, the article focuses on the representation of flagship infrastructure projects as a crucial, but rather disregarded aspect of the politics of infrastructure (Nolte and Yacobi, 2015). By comparing tramway developments in two historically and contemporary differently evolved cities, Casablanca and Jerusalem, we argue that

a) Large-scale infrastructure development projects in urban centres increasingly become parts of national worlding strategies. These strategies do not only represent but oftentimes also materialise into a hegemonial version of the globally aspired "world-class city", branded as "global", "modern" and "sustainable". In this regard, flagship infrastructure projects are a way of marketing modernisation and development, attracting foreign direct investments and tourism and, hence, become a tool to enhance external and internal political legitimacy in times of political and/or economic crises. This may lead to contradictory developments in which the search for legitimacy is questioned by some groups that are affected by adverse effects of ongoing policies of marginalisation.
b) Following this, we argue that these national political objectives can jeopardise the local benefits of tramways. Despite city planners' widespread appreciation of tramways' positive local effects on transport efficiency, social inclusion, and sustainability, flagship tramway projects do not necessarily contribute to more inclusive cities when it comes to infrastructural service provision of neglected neighbourhoods and marginalised populations.

We support our argument by presenting a unique comparative case study in which we discuss the "worlding" of two transport infrastructure projects in Casablanca (Morocco) and Jerusalem (Israel/Palestinian territories). Against the background of two newly implemented tramway projects we show, how the Kingdom of Morocco and the government of the State of Israel, with the support of global companies, expertise and investment, seek to foster their political legitimacy through strategies of "worlding". The tramways as symbols of the emerging 'world-class' city showcase a political willingness to integrate historically marginalised urban peripheries and their populations into a hegemonial vision of modern urbanity. This is, as we contend throughout the discussion, not just an expression of their political power and sovereignty, but rather an attempt to gain or regain legitimacy in times of political crisis.

Methodologically, we adopt an analytical framework in line with Robinson's (2016) call for more comparative urban research and look at the political planning and representation of tramways in Casablanca and Jerusalem. Following Robinson's ideas of genetic comparative tactics, we treat tramway development as a repeated instance with very similar features of production, despite its embeddedness in distinctive political contexts. Hence, the paper stresses important similarities within the political context of tramway projects in Casablanca and Jerusalem, yet without ignoring the striking differences between the two case studies.

The paper builds on field research in Jerusalem and Casablanca, which in both cases took place shortly after the opening of the first tramway line. Both authors spent three to six months in Jerusalem or Casablanca, each researching the ramifications of the tramway planning and

implementation in one of the respective cities. Methods employed during the time of our fieldwork were ethnographic observations, interviews with planners and engineers of the tramways and standardised and semi-standardised interviews with people affected by the tramway.

For this publication, we especially employ methods of content and discourse analysis in which we trace the wording of planning documents, statements of politicians and online publications that all mention, discuss or present the tramway projects to a wider public. We do so in the understanding, that "this 'politics of infrastructure' pertains not only to the implementation of infrastructure as a spatial practice, but also its representation through space-related practices such as in artefacts, symbols, and discourses that attend those spatial practices. Through the way they present, represent, display and narrate the need for infrastructure, its establishment, route and labelling, they contribute highly to the legitimization and justification of its existence" (Nolte and Yacobi, 2015: 30).

The article divides itself into two major parts - each of them introduced by a discussion of relevant literature and followed by empirical insights from the two case studies. The first part deals with the political symbolism and the worlding aspirations of infrastructure, looking at how tramway projects are embedded into national political agendas of city making. Then, the second part sheds light on the wording practices of governments, stressing the local and integrative effects of infrastructure to justify their investment.

2. Infrastructure as worlding practice

Infrastructure such as electricity, sewage or transportation networks have become challenging sites through which politics and society can be studied (cf. Graham, 2009a; Graham and Marvin, 2001; Nolte and Ozdemir, 2018). Among other reasons, this is because infrastructures, as they require planning, construction and maintenance, are deeply intertwined and imbued with political power (cf. Easterling, 2016; Graham and McFarlane, 2015; McFarlane and Rutherford, 2008). While socio-material negotiations and contestations around infrastructure have been widely studied (cf. Harvey, Jensen and Morita, 2017; Kooy and Bakker, 2009), urban studies literature rather neglected the role of the representation of infrastructure and its part in national planning policies. Not only recently, governments have been using infrastructure as technical planning tools but also as political symbols - from Haussmann's Paris to infrastructure's role in the colonial consolidation of rule and political and social order (Nolte and Ozdemir, 2018: 8). More recently and due to rising significance of functioning infrastructure networks in a globalised world (cf. Easterling, 2016; Graham, 2009b), infrastructure has even more become a matter of distinction.

Thus, as we argue in this article, infrastructure projects are a way to mark difference. This leads us to an understanding of infrastructure as a unit of comparison, strongly connected to the dynamics of inter-urban global competition and embedded in a process of influencing one's own positioning in the world in the city. Therefore, we consider infrastructure to be both a significant feature and as a basic condition of 'worlding' practices. As this article conveys an analysis of the representation of infrastructure as part of national worlding strategies, we will discuss how nation states, especially in times of crisis, seek to enhance their political legitimacy by worlding new infrastructure projects with their distinctive vision of the "world-class-city".

According to Roy and Ong (2011), "worlding" refers to the act of being in the world, by influencing worldviews, individual perceptions and pictures of the world. Thus, it refers to a subjective, often fictitious construction of "world-class", which governments may influence through symbolically charged megaprojects or the hosting of international events. Cities are a prime destination for these investments and marketing labels such as "world-class" because of their increasing global economic significance and their visibility on global markets of attention (cf.

Paul, 2004: 572). Hence, “worlding” has to be seen against the background of cities competing with each other on global markets for (foreign) investment and tourists. Ong argues that urban agglomerations “have become sites for instantiating their countries’ claims to global significance” (2011: 2). On the one hand, this has intensified comparisons and competition among cities about attributes of presumptive “world-class” – linked to an inexhaustible variety of superlatives and flagship projects. On the other hand, the worlding concept emphasises the central planning interest of the state, which “seeks to rethink and remake the contemporary world rather than being simply passively ‘globalized’ by it” (Ong, 2011: 10).

National political regimes consider infrastructure as both a means and an end to urban “world-class”. First, this acknowledges the above-mentioned dependence of modern urban life on a variety of functioning networks of infrastructure, seen as the basic condition of broader urban “world-class” aspirations (cf. Easterling, 2016: 12; McFarlane, 2008: 429). Second, it makes infrastructure a unit of comparison, becoming itself an explicit part of urban world-class. In this sense, infrastructure – be it grand boulevards, high-speed trains, or tramways – is the flagship of national modernist visions of progress and development and a way to compete with other global cities.

As such, we understand the investment and implementation of flagship infrastructure projects as a way for political regimes to enhance their political legitimacy amidst political or economic crises. The sheer display of the capacity to plan, develop and deploy infrastructure megaprojects can be read as a way of worlding the state’s legitimacy and potency; a way of appeasing potentially rebellious population groups and of ensuring stability towards investors and tourists. However, although infrastructure megaprojects can be “used to represent state power to its citizens, the political effects of these projects cannot be simply read off their surfaces” (Larkin, 2013: 334). Thus, the intention to employ infrastructure for national goals and in order to enhance political legitimacy has to be carefully scrutinised against the effects that infrastructure projects unfold in their respective local contexts.

Thus, in the following section, we will present two tramway projects in Casablanca and Jerusalem. Both projects are introduced as worlding practices, showing how the authorities are linking infrastructural projects to national aspirations of constructing world-class cities, thereby trying to foster their political legitimacy domestically and internationally. In a second step we will show how governments frame and justify these worlding strategies as transport and mobility improvements in their local contexts, stressing the integrative aspects of the tramway infrastructures. We will then proceed to show that national political objectives and worlding dynamics are intertwined with these flagship transportation projects and may partially contradict the representation of tramways as “transport revolutions” in both local contexts.

2.1. Casablanca’s tramway and the world-class aspiration

Infrastructure is a key aspect in the context of large-scale urban transformation that have characterised Moroccan cities in the twenty-first century. Since the 1990s, Morocco has increasingly participated in global urban competition over foreign investment and has repeatedly invested in the construction of flagship infrastructure, largely ascribed to political symbolism between worlding strategies, the manifestation of political power, and the promotion of political stability. The first example might be the construction of the Hassan II Mosque in Casablanca, in the early 1990s. The construction of this huge royal monument includes plans to connect the mosque and its waterfront with Casablanca’s French new town (ville nouvelle) through the construction of a monumental royal avenue. The royal avenue necessitates the demolition of large parts of Casablanca’s old town (medina) and the displacement and resettlement of approximately 60,000 inhabitants to the periphery of Casablanca. The widely criticised project

plans have already accounted for the displacement of some thousand residents of the medina (Berry-Chikhaoui, 2010).

While the royal avenue underlines the political symbolism of flagship infrastructure, Tangier's new harbour also exemplifies the hegemonic notion of large-scale infrastructure manifesting political dominance. The new harbour Tangier Med II should transform Tangier into an international trade hub linking Europe and Africa (Haller and Wippel, 2016: 12–14). Tangier Med II and additional urban development projects combined under the vision "Tanger Métropole" are thus not only part of Morocco's worlding aspirations but also mark a political shift away from the neglect of the northern parts of the country that characterised the era of Hassan II (Wippel, 2016: 123–124). Since his accession to the throne in 1999, King Mohammed VI has fostered the (symbolic) reintegration of the northern parts of the country, which is pursued through further infrastructural developments such as new motorways and the construction of Africa's first high-speed train (Al Boraq) between Tangier, Rabat and Casablanca (Wippel, 2016: 128–130).

In the same sense, urban mega-projects in Rabat and in Casablanca follow national worlding strategies that should strengthen Morocco's image on global markets as a reliable and stable emerging economy, which may represent a competitive advantage in a rather turbulent region (Beier, 2019a). In Rabat, Morocco's capital and city of the king, costly and highly controversial waterfront developments and investments in high-class cultural infrastructure should boost the city's global recognition (cf. Amarouche and Bogaert, 2019; Bargach, 2011). Mouloudi (2010: 231) writes, "The […] projects aim to create an urban image compatible with the status of Rabat as the capital and to confer an international dimension by reinforcing the competitiveness of the city." With a similar aspiration to supposed urban world-class, ruling authorities drive the urban transformation of Casablanca, including several mega-projects such as the waterfront project Casablanca Marina or the brownfield redevelopment Casa Anfa (cf. Barthel and Planel, 2010). The latter includes the construction of Casablanca Finance City, the flagship project of a strategy to develop Casablanca into an international finance hub (Fig. 7). It is interesting to see that King Mohammed VI, a major driving force in Casablanca's globally oriented urban transformation, explicitly underlines the significance of infrastructure for Casablanca's worlding aspirations. In a speech from October 2013 he declared, "The transformation of Casablanca into an international finance hub requires first of all infrastructure and basic services to comply with international norms" (Chambre des Représentants, 2013; translated from French). In the same speech, he goes further arguing, "Whether a city is booming is not measured only by the height of its towers or the size of its avenues, but through an evaluation of its infrastructures and public services […]." Furthermore, Casablanca's urban master plan (SDAU, Schéma Directeur d'Aménagement Urbain), calls itself the spatial translation of the overall strategy to give Casablanca the status of a 'world-class' metropolis (Agence Urbaine de Casablanca 2008: 4). Thus, the tramway, mentioned as an explicit flagship project in the SDAU, ascribes clearly to Morocco's worlding aspirations (Beier, 2019b).

Fig. 7 Imagineering world-class through the tramway: The construction of Casablanca Finance City. Author's picture, July 2019.

In December 2012, King Mohammed VI himself inaugurated Casablanca's first tramway line, which again shows the national significance of this public transport project. The first line connects the working-class neighbourhoods of Sidi Moumen and Hay Mohammadi in the east with the city centre and Casablanca's western beaches located in the wealthy neighbourhood Ain Diab). The second tramway started operating in January 2019 and two more lines are in the process of planning. Whereas the French Alstom company built the waggons of T1, Casa Tram, a subsidiary of the French company RATP Dev is charged with the operation and maintenance of the tramway system. While there is already an international aspect in it, the tramway's global dimension goes far beyond business relations. Moroccan authorities – in a typical way of national worlding practices – use the tramway to promote the image of a modern and global metropolis. On its website, Casa Tramway (2013), for example, writes, "The tramway … [is] ecological, reliable, and efficient. Numerous big cities around the world have tramways (Paris, London, Dubai, Rabat …)." Likewise, asked about the motivations behind the tramway, Nadia Bouhriz, former director of Casa Tramway, responded: "the principle issue was to raise Casablanca to the rank of major world metropolis" (as cited in Désveaux, 2013: 128).

However, the focus on flagship tramways carries the risk of one-sided political and economic investment with only limited cost-efficiency (Beier, 2019b). In Casablanca, the local development company Casa Transports, established by public authorities as a developer of Casablanca's tramway in 2009, has later been charged with planning and coordinating the transport system of the entire metropolitan region. In reaction, the World Bank has warned of the risk of focussing exclusively on the extension of the tramway network. Seeing tramways as the ultimate solution to problems of urban congestion would impede the implementation of more comprehensive urban public transport strategies, while ignoring alternative solutions such as BRT. "It is important to analyse whether spending 40 percent of all urban transport investments on these tram lines would be worthwhile, considering the large number of other road, traffic, and bus-related investment needs in Morocco's other cities" (Xu and Manibog, 2016: 23–24).

This critique reflects an earlier call for investments in a comprehensive, multi-modal urban transport system – the result of a diagnosis of Casablanca's urban transport, developed with support of the World Bank (Crochet and Leyvigne, 2008). However, so far, only the tramway was implemented. While more lines are planned, the official public bus concessioner operates detached from the tramway, suffers from considerable underinvestment and does not serve the whole metropolitan region. Other common means of public transportation such as shared taxis (grands taxis) have not been included in transport planning. Because of that, Xu and Manibog (2016: 16) again underline that the focus on flagship tramway projects requires "a broader vision […] that should include other modes of public transport (such as BRT), transport demand management, and non-motorised transport."

2.2. Jerusalem - Worlding the united city

Similar developments concerning the role of infrastructure as worlding practice can be observed in Israel. In the last decade, the Israeli government has implemented huge infrastructure projects stylised in the "national interest". Among the biggest ones are projects that enable transportation mobility throughout the country. Some of these infrastructural projects have been received ambivalently in Israel and in some parts of the international community due to their disruption of everyday live and business in Israel (as it is the case with the tramway project in Tel Aviv) but - for some of them - also due to their controversial routing. Importantly, the planning and implementation of several of those projects takes place amid Israel's longstanding repressive politics towards its Palestinian citizens and its violent military occupation of the Gaza strip, the West Bank and East Jerusalem (Dumper, 2014: 16–85; Salamanca, 2015; Elden, 2013).

On the other hand, large-scale infrastructure projects have become an important worlding practice that help to represent Israel to an international audience and attract tourists from all over the world. Representing it as the "island of civilization surrounded by savages" (Gordon, 2011: 117), Israel is marketed as a safe alternative to investment and traveling into surrounding countries with their unstable political and economic conditions. The worlding through prestige infrastructure projects happens amidst times of political crisis in Israel: the recently passed Nation State Bill that defines Israel as a primarily Jewish state has stirred much debate about the democratic future of the country and has put in question its commitment to the equality of all its citizens and residents (Horovitz, 2018). Further, in the last years the State of Israel is facing an increasingly dominant worldwide movement, the "Boycott, Divestment, Sanctions-Movement (BDS)" that seeks to isolate Israel from taking part in international collaboration and dialogue. By persuading international artists, scholars and musicians not to visit Israel and, hence, not to legitimise the Israeli occupation of the Palestinian people, the BDS movement has recently managed to convince star artists, such as Lana Del Rey, to cancel their concerts in Israel (Stern, 2018).

Thus, in times of political crisis, worlding through flagship infrastructure projects that can enhance international collaboration, global investment opportunities and Israel's international outlook to the global community provide a good source of political legitimation.

This connection between infrastructure and worlding practices becomes especially evident in contemporary Jerusalem, which has seen an increase in infrastructural investment in the last decade. Long considered the hinterland of the thriving metropolis Tel Aviv, Jerusalem is now at the forefront of Israeli national worlding aspirations. Upon his inception as mayor in 2008, Nir Barkat, until finishing his term in late November 2018, has promised to turn Jerusalem into an international investment hub and major tourist destination. In his vision for Jerusalem, Barkat promises to exploit the touristic potential of the city: "While Jerusalem hosts just over two

million tourists a year, my goal is to reach ten million a decade from now. Paris, London, Rome, and New York have over 40 million tourists a year. By increasing the number of tourists that visit the city, we will gain on a number of fronts." (Barkat, 2010). Moreover, Barkat states his vision of a united Jerusalem, becoming a domestic and international attraction for capital, culture, tourism and the creative class. In a briefing prepared for the "Honorable Mayor Nir Barkat", the global advisory firm "Creative Class Group" presents a vision of Jerusalem as "a place of authenticity, spirituality and purpose" which is "ushering in a new way of life as a world-class city with inclusive economic opportunities that cut across secular lines." (Creative Class Group, 2015: 3). The report states, "Jerusalem's ability to attract and retain this Creative Class will determine its competitiveness within the global hierarchy" (Creative Class Group, 2015: 4).

However, in Jerusalem, global aspirations and planning strategies are closely linked to national geopolitical interests (Dumper, 2014; Shlomo, 2017). Jerusalem is a deeply politicised and contested city. Its enforced and unilateral unity as an Israeli city is not recognised by the international community and by its Palestinian residents. Therefore, the world-class aspirations of the Jerusalem Municipality and the governmental ministries have to be also read as an attempt to normalise Israeli political rule over Jerusalem (Baumann, 2018). By situating Jerusalem amongst other global cities, the deep segregation, discrimination and structural violence that the city and its Palestinian inhabitants are facing, is not only negated but actively erased by means of producing a narrative of Jerusalem as the united city under Israeli control (Said, 1995: 6). By presenting, planning and building Jerusalem as an exclusively Jewish Israeli city, the municipality, the government and its ministries are creating a perception of Jerusalem that stresses its Jewish heritage while simultaneously ignoring other histories, narratives and claims to the city (Nolte, 2016). The experience of Jerusalem as the capital of the Jewish State of Israel is thus deeply produced - and infrastructured. One of the largest infrastructure projects that has been implemented in Jerusalem and is equally political and contested in its scope and symbolism, has been the planning, implementation and running of a tramway transportation project. Administered and governed by the Jerusalem Municipality and the Ministry of Transport and Road Safety, the light rail project is the most ambitious among many projects that seek to place Jerusalem in the realm of other world-cities, praising its long and important history while equally stressing its modernness and attractiveness as a prime tourist destination.

The "Red Line" of the Jerusalem Light Rail (from now on JLR), the first inner city light rail system in Israel that was built and implemented in the early years of 2000 and started its service in 2011, was introduced to the public as the realisation of the early Zionist Theodor Herzl's dream (Nolte and Yacobi, 2015). Running from South-West to North-East Jerusalem, the JLR has changed Jerusalem's cityscape tremendously since its inception. It connects 23 stops throughout the city, serving a big part of Jerusalem's heterogeneous and diverse population (Feitelson and Cohen-Blankshtain, 2018). The Jerusalem Transport Management Team, established by joint efforts of the Israeli Ministry of Transport and Road Safety and the Jerusalem Municipality, heads the planning and implementation of Jerusalem's tramway-network. On its recently launched website, the JTMT presents the plan to extend the JLR network in Jerusalem as "one of the largest projects across Europe and the Middle East. We are excited at the prospect of this and fully committed to bringing it to its optimal completion. We invite you to join us in realizing the vision for a new transportation reality in Jerusalem." (JNet, n.y.).

Presented as a "major transportation revolution" (JNet, n.y.) and a means of increased public mobility in a congested city, the JLR planning and implementation process has been accompanied with huge efforts to represent the JLR as a success story of modernisation and international cooperation (Daniel and Render, 2003; Nolte and Yacobi, 2015). To an international community of planners, the JLR was presented as an upgrade from "Mule Tracks to Light Rail Transit Tracks" (Daniel and Render, 2003), linking Jerusalem's ancient history with its contemporary urban renewal process. The employment of the term "metropolis", as Farias and

Stemmler (2012: 49) have pointed out, has become a key concept in city branding, transmitting a "sense of economic resurgence, urbanity, new urban lifestyle and a renewed city." Moreover, the idea of marketing cities as "metropolis" does not only link them to ideas of modernity, progress and hipness, but also to strategies of economic success through which "cities seek to become more attractive for tourists, artists, creative and cultural industries, financial investors, and high-tech industries (Farias and Stemmler, 2012: 50). Following this, the depiction of Jerusalem as a "metropolis" and aspiring world-class city by linking it to its revolutionary JLR infrastructure, lays open the intimate relationship between infrastructure and worlding strategies. The representation of cities through infrastructural flagship projects shows, how national policies, economic interests and infrastructural upgrades are tied together in the process of worlding. Moreover, the JLR project also exposes the Israeli national planning agenda that sees infrastructure projects as tools of control and symbols of ownership. Mayor Nir Barkat was quoted in several sources linking infrastructure to the Israeli ownership over Jerusalem: "Without the infrastructure of trains, cable cars and so forth, we won't be able to experience this unique experience. To bring the wider world, to understand who really owns this city – all this infrastructure is intended for that." (Nir Barkat, as cited in Hasson, 2016). This quote lays open the argument put forward in the paper: infrastructure, and especially transportation infrastructure is part of worlding strategies of cities and states. Beyond just serving local needs for connectivity and transportation, many large-scale infrastructure projects are driven by national aspirations and geopolitical interests.

Despite an initial good reception and the frequent use by Israeli citizens, Palestinian residents, and international tourists alike (Feitelson and Cohen-Blankshtain, 2018), the JLR has not remained uncontested. The JLR's smooth and silent passage through Jerusalem seems to suggest an organic urban integration and continuity, but it is exactly this continuity that is at the heart of the conflict between the Israeli authorities and Palestinians when it comes to Jerusalem. While the Israeli government claims East Jerusalem's territory (not necessarily its Arab-Palestinian population, see below) to be part of one united Jerusalem under Israeli sovereignty, Palestinians consider it the capital of a future Palestinian state. Conquered 1967 from Jordan, East Jerusalem and its Palestinian population were annexed by and to Israel within a few days. The Israeli government immediately expanded the municipal boundaries of Jerusalem and extended political and juridical sovereignty over the Eastern parts of the city (Dumper, 2014: 60). Since then, Israeli authorities treat East Jerusalem as integral part of an "united" Israeli Jerusalem, while Palestinians and the international community consider East Jerusalem to be unilaterally occupied.

Hence, the worlding of Jerusalem through the JLR infrastructure has to be scrutinised in its attempt to erase any kind of contestation and conflict from the official representations of the city. This will be done in more detail in section 3.2 of this paper. In the following section, we will discuss the official framing of infrastructural projects as forms of urban integration.

3. Wording infrastructure - public transportation and the claim to inclusion

Despite large-scale infrastructure projects being part of national worlding strategies, governments' wording to justify these investments is still referring to classic rationales behind infrastructure investment. This does not mean that governments hide the fact that these developments serve global aspirations, but they apply careful wording strategies to underline the public use of large-scale infrastructure and to enhance local acceptance. Concerning public transport, governments stress its role for the reduction of urban congestion and air pollution as well as for improved socio-spatial integration. This wording refers to classic notions of infrastructure

as binding elements within urban agglomerations. “Infrastructure networks are thus widely assumed to be integrators of urban spaces. They are believed to bind cities, regions and nations into functioning geographical or political wholes” (Graham and Marvin, 2001: 8).

Of course, this includes public transport, to which policy makers and academics – besides environmental objectives – have traditionally ascribed a positive effect on social equity and urban integration. Affordable public transport may be an important facilitator of urban mobility, in particular for those people unable to afford means of private transportation. Because access to urban opportunities such as public services, workplaces, and social networks is crucial for people’s own life-enhancing activities, public transport may be considered a “key factor in the economic and social development process” (Lucas, 2011: 1321). In other words, access to affordable public transport facilitates urban mobility of poorer people, reduces urban exclusion and, thus, could be an essential part of policies targeting the reduction of urban poverty (Godard, 2011).

Hence, in the context of urban planning, governments and international actors in development cooperation have repeatedly promoted public transport innovation as a means to overcome socio-spatial segregation and to integrate urban margins - at least spatially (cf. Gilbert, 2008; Rokem and Vaughan, 2018). Besides environmental aspects, this social wording is a characteristic element of tramway planning in Jerusalem and Casablanca as we show below. Both cities have historically developed into strongly segregated urban agglomerations but for different reasons and to a different extent.

In Casablanca, colonial authorities implemented strict segregation between the Moroccan working class and the European as well as the Moroccan élite (cf. Rabinow, 1992; Rachik, 2002). Rural migrants that came to Casablanca to find a job in the industries were not allowed to settle within the limits of the European city. Instead, they built their own houses on vacant or abandoned land close to their workplaces. These settlements called bidonvilles became the centre of Casablanca’s working-class neighbourhoods (quartiers populaires) such as Hay Mohammadi and Sidi Moumen. In general, colonial authorities and the post-independent government tolerated and even consolidated these self-built settlements. However, state’s tolerance (or indifference) towards working-class neighbourhoods repeatedly stopped in reaction to social unrest, which Rachik (2002) has called an urbanisme de l’urgence (urbanism of urgency). For example, after the bread riots in the 1980s, the government implemented a number of repressive resettlement approaches that have displaced bidonville dwellers towards the urban peripheries. Similarly, in 2003, suicide bombings of bidonville dwellers from Sidi Moumen in Casablanca’s city centre triggered the national programme Villes sans Bidonvilles (VSB, cities without shantytowns) that aims at eradicating all bidonvilles in Morocco. In a neoliberal logic of globalised capitalism, such incidences of revolt and violence may impede the city’s selling position on global markets for tourism and investment (cf. Bogaert, 2018). In this sense, governments combine discourses about urban integration (e.g. social housing, tramway) with more repressive political actions (e.g. evictions) to overcome the political crisis, to appease certain population groups, and to secure political stability - also for economic reasons.

In Jerusalem, segregation has evolved historically and has been strongly associated with the time of the British rule over Mandatory Palestine. Whereas Jerusalem used to be an ethnically and religiously mixed city until the late Ottoman Empire (Klein, 2014), the British Mandate authorities promoted segregation based on ethnic and confessionally fixed identities (Pullan, Sternberg, Kyriacou, Larkin and Dumper, 2013: 13–14). Later, the urban segregation grew stronger through the war between the newly established State of Israel and its Arab neighbours. Jerusalem became a divided city. Separated by an UN-controlled border, West Jerusalem was part of the State of Israel while the Eastern parts, including the old city, were occupied and later annexed by the Hashemite Kingdom of Jordan. Urban planning strategies appeared

to be very different under the respective Israeli and Jordanian authorities. While West Jerusalem was quickly incorporated into the State of Israel - planned and developed accordingly - East Jerusalem remained a rather neglected part of the Hashemite Kingdom of Jordan since the focus of development and urbanisation was on the capital of Amman (Efrat and Noble, 1988). After the war in June 1967, East Jerusalem was occupied and then annexed to Israel. Eager to make the entire city Israeli, Israeli authorities promptly applied Israeli law to the entire city (Seidemann, 2015: 28). Segregation between the Jewish-Israeli and Arab-Palestinian population remained strong and was reflected in the different infrastructure services running parallel to each other. In contemporary Jerusalem, the segregation is not exclusively between East and West Jerusalem anymore. More than 200,000 Jewish Israelis now reside within East Jerusalem (Seidemann, 2015: 32), making the separation and division of services not a geographical one but rather one that is based on ethnic differentialisation and citizenship. While the Israeli authorities claim sovereignty over entire Jerusalem, services are unequally divided between the Israeli and the Palestinian population. In the last years, the Jerusalem Municipality has stepped up efforts to serve the Palestinian population in their neighbourhoods (Shlomo, 2017). This is been received ambivalently since an upgrade of infrastructure and services is highly needed on the one hand. On the other hand, Palestinians are well aware that the extension of infrastructure such as the JLR also comes at their expense. Infrastructure projects come to represent an inclusion that is partial and rather cosmetic. It suggests a spatial continuity between West and East Jerusalem and an inclusion of a population that, in large parts for political reasons, does not seek to be included into an Israeli Jerusalem.

In the following section, we discuss the selective inclusion through tramway projects in the respective context of Casablanca and Jerusalem. We will show how this inclusion takes place mainly on a discursive level while other factors of exclusion and expulsion are not being tackled sufficiently.

3.1. Selective inclusion and displacement alongside Casablanca's tramway

In Morocco, public authorities have repeatedly stressed that the tramways of Rabat/Salé and Casablanca should improve the socio-spatial integration of marginalised working-class neighbourhoods (cf. Strava, 2018). In its national report for UN-Habitat's Habitat III Conference, the Kingdom of Morocco (2014: 49) underlines that the "tramway has a social component. It contributes to the opening up of highly populated areas, serving the suburbs of the cities concerned." Thus, the tramway is not only part of worlding ambitions, but also a symbol of the new political agenda of King Mohammed VI. Branded as the 'king of the poor', the monarch aims at enhancing his political and moral legitimacy among the urban poor by calling for the fight against urban exclusion (cf. Bogaert, 2018).

In contrast, the tramway embodies the aspired image of a world-class metropolis (section 2.1), in which some reputedly 'non-modern' but characteristic elements of the Moroccan urban periphery, such as bidonville dwellers and street vendors, have no place anymore. With reference to Rabat, a representative of the Moroccan Network for Decent Housing has left no doubt that urban world-class is not meant for everyone: "There is the strategy to make Rabat a capital of light. That is a completely new conception, with the tramway and everything. That is what represents the waterfront (corniche), with its tourist buildings etc. There are other choices made than resettling (bidonville) dwellers within the city" (A. A., March 23rd, 2015, emphasis added, translated from French). Thus, the national discourse stressing the integrative role of the tramway seems to contradict with the tramway being a driver of urban renewal.

That being said, the renewed political commitment to "long-term forgotten, yet ignored urban peripheries" (Rachik, 2002: 9) also carries a strong economic rationale. In times of economic

crisis, Morocco depends on its political stability as a competitive advantage to generate much needed revenues from foreign direct investment and tourism (Bogaert, 2018: 2). Hence, it is not a coincidence that the terminus of the first tramway line is Sidi Moumen. The neighbourhood has become a nation-wide symbol of a social crisis at the neglected urban margins, known as the home of suicide attackers who killed more than thirty people in Casablanca's city centre in 2003. Following the mechanisms of an urbanism of urgency, the urban renewal of Sidi Moumen has become an urban planning priority, manifested in the city's urban master plan. Following the SDAU (Agence Urbaine de Casablanca, 2008: 24), the tramway in Sidi Moumen is part of a larger set of interventions framed under the term 'urban (re-) integration', including the construction of low-cost housing, the building of new boulevards, the resettlement of shantytowns, and the beautification of urban infrastructure. A member of the municipal council of Sidi Moumen, quoted in an article of Le Monde Afrique, nicely illustrates the political narrative of urban integration in 2009: "In 2012, Sidi Moumen will have totally changed its face. The big stadium of Casablanca will be built here and the future tramway will start from there. The future of Casablanca is here!" (Beaugé, 2009). Although the plans to build a new stadium have disappeared in the meantime, the message is clear: The tramway will manifest the full recognition and integration of Sidi Moumen into modern Casablanca. The neglect of the neighbourhood symbol of a social crisis belongs to the past.

Similar narratives also exist in another formerly marginalised working-class neighbourhood, Hay Mohammadi, where the construction of the tramway pushed for a modernist face-lift of the neighbourhood. As in Sidi Moumen, public authorities have largely invested in the renovation and beautification of streets, public spaces and public buildings along the line. Some local residents have even considered the tramway as an atonement, a political symbol that portrays the kingdom's will to reintegrate neighbourhoods that suffered from political repression and neglect – mostly during the "Years of Lead" under King Hassan II (Strava, 2018). However, the tramway-led urban renewal also fostered the displacement of one of the most established street markets and further accelerated the demolition of Karyan Central, Morocco's oldest informal settlement (Fig. 8). Other observers, such as the representative of a local neighbourhood association (A.B., March 26th, 2015) warned of increasing land prices and real estate speculation because of the tramway-led urban renewal in Hay Mohammadi.

Fig. 8 The construction of the second tramway line in Hay Mohammadi pushes away street vendors and fostered the demolition of Morocco's oldest informal neighbourhood, which used

to be at the same place than the white construction facilities on the right. Author's picture, February 2017.

It seems that the discourse of urban integration of Casablanca's quartiers populaires is inevitably tied with modernisation and worlding strategies that spread from the city centre towards these neighbourhoods. While the 'world-class' Casablanca is continuously absorbing more space, street markets, shantytown dwellers, and other traditional forms of urban public space are under threat. In the context of the VSB programme, most of the inhabitants were resettled to peripheral new towns outside the reach of official public transport networks. Thus, while (local) governments present the tramway as an integrating element of Sidi Moumen and Hay Mohammadi and while many residents welcome the neighbourhoods' modernisation, ten thousands of bidonville dwellers were displaced from these neighbourhoods at the same time. In an exemplary way, one interviewed resettled resident (January 25th, 2017) noted "The politicians they only care about the renewal of Hay Mohammadi! They do not care about the people!"

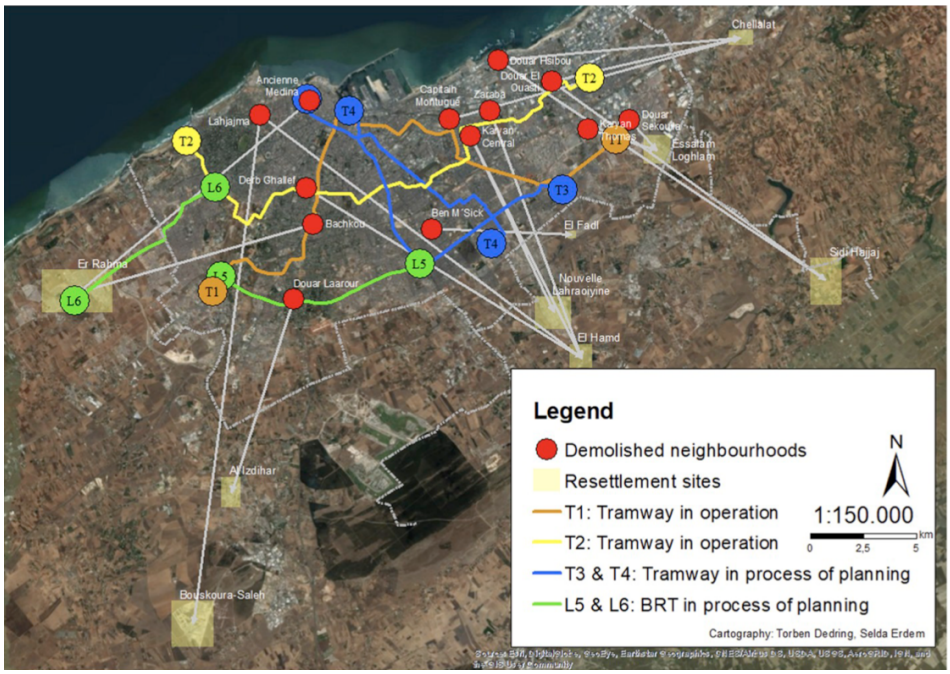


Fig. 9 Selected shantytown resettlement projects and the tramway and BRT network vision for 2022. Cartography: Torben Dedring and Selda Erdem.

Fig. 9 illustrates several resettlement projects and contrasts them with Casablanca's projected tramway and BRT network in 2022. It shows that only the new town Er-Rahma is likely to be integrated into advanced public transport networks. In contrast, most other new towns are located outside the administrative borders of Casablanca, which means that they are neither served by the public bus concessioner M'dina Bus, nor by individual taxis. Indeed, transport deficiencies are one of the two most frequently mentioned disadvantages of the new town among resettled residents in Nouvelle Lahraouiyine. The displacement of ten thousands of shantytown dwellers to inadequately integrated urban outskirts conflicts largely with the tramway's objective of socio-spatial integration (Beier, 2019b). While the wording of integration includes all inhabitants of quartier populaires, implementation on the ground clearly distinguishes between residents of formal(ised) working-class houses and bidonville dwellers.

One example is the case of the bidonville Karyan Central, which used to be the core of Hay Mohammadi, known to many Moroccans for its role in the independence movement. The entire neighbourhood Hay Mohammadi developed out of Karyan Central. In 2009, the authorities

started resettling the approximately 30,000 inhabitants to the new town Nouvelle Lahraouiyine, located about ten kilometres away from Hay Mohammadi outside Casablanca's jurisdiction (see Fig. 9). Most of the people accepted the resettlement conditions and moved to the new town. However, in March 2016, authorities forcibly evicted 500 remaining households, which had continued resisting the resettlement. Authorities urged to clear the land and to start with the construction of Casablanca's second tramway line on top of the ruins of former Karyan Central. According to an interview with an involved architect, public authorities plan to build an urban green space and hotel developments on top of the former shantytown now that the second tramway is finished. In contrast, the resettled residents, from which large parts were born in Hay Mohammadi, now are excluded from official public transport systems. Nouvelle Lahraouiyine is only served by shared taxis and a bus company without concession. The latter lacks any public support and, thus, is unable to invest in the maintenance of their bus fleet. For example, many of these buses have broken windows or lack functional doors. Moreover, according to our interviews, many inhabitants of Nouvelle Lahraouiyine fear to take the bus because of repeated incidents of violence, drug abuse, and sexual harassment.

Finally, it is not only the tramway's claim to social integration, which is at odds with the displacement of a considerable number of people from Hay Mohammadi to the underserved new town of Nouvelle Lahraouiyine. Likewise, the case of the resettlement of Karyan Central calls into question the environmental objectives of the tramway. Air pollution and traffic congestion are unlikely to decrease, if at the same time people have to move to a place, where they depend on highly polluting means of transportation in order to reach their workplaces. This gets even more problematic, considering the fact that most of the residents did not depend on motorised transport on a daily basis prior to resettlement. Thus, Casablanca's tramway project underlines that investment in public transportation is unlikely to reduce urban congestion if it is not aligned with the objectives of concurrent urban policies. Instead, state authorities embed the tramway within a discourse on urban integration and modernity to regain political legitimacy both domestically towards the previously neglected urban peripheries and externally to an international community supporting 'democratic' development and security policies in Morocco. However, hidden behind this integrative rhetoric, the state continues with policies seeking to exclude particular population groups from the city.

3.2. Jerusalem: Selective infrastructural inclusion amidst political exclusion

Similar to the process of planning, implementing and representing the tramway in Casablanca, the JLR has been presented as an integrative and connecting urban transportation infrastructure (Baumann, 2016; Nolte and Yacobi, 2015). In interviews conducted with representatives of the JTMT, the operator Citypass and the Ministry of Transport and Road Safety during our fieldwork in Jerusalem in 2017, all of them were eager to portray the JLR as an efficient, environmentally friendly, and modern transport solution. One representative of the JTMT stated that:

> *"15% of our customers told us, when (we) launched the JLR, they left their car at home and started to use the network. (…) We see new shops that opened in the city centre. Which means that the light rail and the new bus system improved (…) the city centre and is totally relevant for the people of Jerusalem and for tourists"* (N. M., 2017).

Not only did he praise the tramway as an urban renewal project but also as a means to promote coexistence between Jerusalem's different communities:

> *"Today, the LRT is a tool for three communities; for the general people who live here, for the Arabs, and for the ultra-orthodox. You see all of them together in one vehicle. Some may say that this is a very bad idea, but for us: perfect! (…) So, you see a mixture, which is good for the*

> *life of the city. (…) You know that everything is sensitive and there (are) tension (s) (…). But the light rail is a transportation project and the idea is to serve all the people"* (N. M., 2017).

However, critics, such as the below cited Israeli tour guide and urban activist in Jerusalem, see the JLR as a flagship project of the Jerusalem Municipality and the Israeli Ministry of Transport and Road Safety, wasting millions for the JLR instead of upgrading the existing infrastructure through investment in the existing bus system:

> *"In all the propaganda movies about Jerusalem, you always see the train as a symbol of (how) Jerusalem is also modern. It is supposed to be the pride of the city (…) I think (that is) one of the reasons, they choose the train over let's say BRT, which could have been better. (…) It's kind of symbolic … It's not what's good for Jerusalem (…) it's how can we use Jerusalem to promote certain national ideas. That's the issue."* (S.B., 2017).

During conversations in Jerusalem, many informants pointed out that the JLR has not really eased traffic in the city centre, but rather relocated congestion to the side streets around the JLR route. Some acknowledged that the train certainly eases commuting and traveling for those people living close to the light rail line. For others, rather the opposite seemed to be the case. Further, the full integration between the existing bus system and the new JLR system has only happened partially and slowly. While the Israeli bus system was adjusted to the routing of the JLR (Feitelson and Cohen-Blankshtain, 2018), the ticketing systems lacks this integration with the Palestinian bus system. While using the JLR is lately fully integrated into the Israeli public transportation system (through the "Rav Kav", a stored value "Smart Card" that can be charged and then used on the tram and bus instead of buying tickets), the Rav Kav does not (yet) apply to the Palestinian buses operating in East Jerusalem (Berger, 2017). Palestinians, frequently using the JLR and the Palestinian buses in Jerusalem, have to purchase tickets for their busses in addition to single tickets or a Rav Kav for traveling with the JLR.

As the quote above indicates, many critics and activists see the light rail as a powerful tool to cement the Israeli claim to a united city Jerusalem (Barghouti, 2009; Hasson, 2017: 24). According to them, the efforts of representing a united Jerusalem to the world by means of infrastructure can only be understood as an attempt to normalise the Israeli claim to the entire city of Jerusalem (Fig. 10). The infrastructural upgrade of some parts of Jerusalem has thus to be read against the purposeful infrastructural neglect of other parts.

The different perspectives on the JLR stem from the often ambivalent Israeli policies towards planning and infrastructuring Jerusalem as one united city under Israeli sovereignty since 1967 (Shlomo, 2017). While the 522,000 Jewish Israelis living in Jerusalem enjoy full citizenship rights in the State of Israel, 308,000 Palestinian Jerusalemites face a special legal situation in Jerusalem. They are so-called "Jerusalemites" which gives them a specific set of rights as "residents" of the city. They have the right to live and work in Jerusalem, receive social benefits and education from the Israeli government and they are entitled to vote in the municipal elections (Jefferis, 2012: 95).

Fig. 10 Celebrating 50 years of "uniting" Jerusalem in the year 2017, the train was decorated with the blue-white Israeli flag, stating: "Jerusalem, united and uniting", Author's picture. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

Palestinian everyday life in Jerusalem however is shaped by forms of infrastructural neglect (Baumann, 2018; Dumper, 2014; Hasson, 2017). This is reflected in the discriminating budget allocation and service provision for the Palestinian residential areas in Jerusalem. While Palestinian East Jerusalemites make up around 37% percent of the city's residents, only 12% percent of the municipal budget is allocated to urban planning and infrastructural services in Palestinian neighbourhoods (Abu Goush, 2016; Dumper, 2014: 94). Palestinians suffer from a severe infrastructural neglect in East Jerusalem, which lacks paved roads, water provision, a connection to sewage systems and educational facilities such as kindergartens, schools and health care provision (Association for Civil Rights in Israel, 2017).

In addition to the lack of everyday infrastructure, Palestinian residents of Jerusalem can lose the right to Jerusalem if they cannot prove that they live in Jerusalem permanently. Against this backdrop, more than 14,000 East Jerusalem Palestinians have had their residency status revoked between 1967 and 2008 (Seidemann, 2015: 32). As a result, they mostly have to move to the Westbank and thereby lose the right to be or work in Jerusalem. Thus, being in danger of losing their right to live in the city, the Palestinian population in Jerusalem lives in constant fear of expulsion.

Another aspect of infrastructural neglect is the fact, that Jerusalemite Palestinians can be evicted from their own houses in Jerusalem. Since the Palestinian population of Jerusalem has grown from 69,000 in the year 1967 to 308,000 people in the year 2014 (Seidemann, 2015: 32), the need to build and expand the neighbourhoods in East Jerusalem has increased tremendously. However, the municipality of Jerusalem only issues around 100 building permits to Palestinians a year (Abu Goush, 2016). The expansion of houses has nevertheless taken place out of an urgent need to accommodate the increasing population numbers. While ignoring the need for planning and building permits, the Jerusalem Municipality is issuing demolition orders instead. Those demolitions come under the premise that these houses are built illegally since they have not received any building permit in the first place. Today, one-third of the houses in East Jerusalem are under the threat of demolition by the Israeli authorities, which

means that they can be destroyed anytime. About 1,600 houses have been demolished in East Jerusalem since the year 1992, affecting the lives of at least 8,480 people (Abu Goush, 2016). Thinking beyond houses as mere material structures, these destructions not only attack the material basis but also the affective and mental relations that Palestinians uphold with their houses as “homes” and centres of intimacy (Amrov, 2017).

These processes of active infrastructural neglect and destruction have to be contrasted with the huge investment into infrastructural development in the non-Palestinian neighbourhoods of Jerusalem. The municipality, together with the Ministry of Transport and Road Safety and the Ministry of Tourism, invests in large scale infrastructure, building parks, archaeological sites, a museum of tolerance and new roads, mostly in West Jerusalem or in the Jewish-Israeli settlements in East Jerusalem (Wharton, 2018). This continuity of Israeli space and mobility through infrastructure has come to function as a form of violence, disrupting Palestinian everyday life and mobility while at the same time normalising Israeli presence and mobility in Jerusalem (Baumann, 2018).

It is against this background, that the JLR has to be critically analysed and contextualised in Jerusalem. Indeed, the train has eased mobility for some and Palestinians increasingly use the JLR to commute to work and for leisure activities in West Jerusalem. However, by passing the two Arab-Palestinian neighbourhoods of Shuafat and Beit Hanina on its way to the Jewish-Israeli settlement of Pisgaat Zeev, the shiny and new train running smoothly on its tracks, stands in stark contrast to the infrastructural neglect that characterises Palestinian neighbourhoods in East Jerusalem. Not only has the train increased the proximity between Palestinian and Israeli neighbourhoods by actively enforcing continuity between them (Wharton, 2018: 51). By passing through the two neighbourhoods of Shuafat and Beit Hanina, the JLR has also made these neighbourhoods more “legible” to Israeli control and surveillance (Baumann, 2018).

However, as already mentioned on the outset of the paper, the local urban complexities of Jerusalem go beyond clearly bound dichotomies of Israeli/Palestinian, domination and dominated. The necessities of everyday life, the intention to plan for a future in the city have turned the JLR into a site of ambivalence. While some of our interlocutors emphasised their willingness to boycott the train as a symbol of occupation, some others pointed to its smoothness and convenience, offering the opportunity to easily commute through the city centre and enjoy the facilities of upgraded urban West Jerusalem. Some hinted that they have found ways to forego payment since they learned how to recognise the people who control the tickets. Others again, have mentioned unease traveling with Israelis, feeling unwelcome and sometimes threatened. Understanding the frequent passage of the train, the small forms of boycott and everyday knowledge as “small acts of evasion” (Von Schnitzler, 2015), the JLR has yet to be scrutinised with careful attention. While it may be used to represent the Israeli national power and political legitimacy to govern Jerusalem as own sovereign entity under Israeli control, the local context might produce less straightforward results. As such, the complex and often-contradicting processes of the JLR require further careful ethnographic attention against the background of its local context and beyond the seemingly obvious political agenda that it might engender.

4. Discussion: tramways and the national planning hegemony

The discussion of tramway projects in Jerusalem and Casablanca shows remarkable similarities, the different political contexts notwithstanding. Both tramways can be considered flagship projects of national worlding strategies, embedded into the context of a central state in crisis that seeks to strengthen its hegemonic position and to influence its global status in the world.

However, as both countries face a crisis of political legitimacy, the image of the modern, sustainable world-class city, running smoothly with high-end public transport, functions also as a tool and symbol to promote infrastructure as socially integrative elements for merely political reasons. The analysis of the two case studies has shown that the tramways are only partly integrated into a comprehensive public transportation system. While both projects have been planned and implemented with attention to the local context, national political objectives still seem to have been the more powerful drivers behind the routing and implementation of both tramway projects, for very different reasons notwithstanding.

In both cities, colonial planning policies have shaped spatial segregation and they have long lacked a comprehensive urban planning strategy. Nowadays, both countries face significant social and political challenges that shape public space of the political and economic urban centres. In Casablanca, Mohammed VI uses infrastructure development to demonstrate political willingness to integrate formerly neglected neighbourhoods. His political agenda is marketed as a turn away from the repressive policies of his father, although many implemented programmes such as the resettlement of shantytown dwellers are in fact a continuation of previous policies. In Jerusalem, the urban space is largely dominated by diverging claims of ownership over the city. While the State of Israel claims full territorial and national sovereignty over the entire city, Palestinians uphold their claim to East Jerusalem as part of a future Palestinian state. They reject the Israeli claim over Jerusalem. Amidst this political, at times also violent contestation, the urban planning strategies and policies of the Israeli government and the Jerusalem municipality seem to be driven by ethno-national considerations to integrate as much city space into the city and govern the city as one entity while providing differentiated services to the different populations living there. Infrastructure here, among other urban planning tools, is used to promote a continuity and integretatedness of the city that remains heavily contested on the ground while infrastructural neglect is used as a tool to decrease Palestinian willingness to keep living in East Jerusalem.

This leads to the differences between the two case studies. The acceptance of the discourse that frames the tramways as integrative differs in Casablanca and Jerusalem. In Casablanca, the majority of urban dwellers - in particular in the working-class neighbourhoods - accept the king as the country's main moral and political institution and even share most of the modernist discourse. Hence, people tend to welcome and use the tramway as a 'modern' urban development that arrives at the traditional peripheries. In contrast, in Jerusalem, the Palestinian population (and some Israelis) refuse to acknowledge Israeli sovereignty over (East) Jerusalem and consider it, in line with international law, as an occupied and colonized city. They hence refuse the integrative narrative of the JLR. However, Palestinian residents of Jerusalem remain underserved infrastructurally and hence depend heavily on the services provided. This has grown into an ambivalence of using and refusing the JLR at the same time.

Nonetheless, the paper has, for both cases, shown striking discrepancies between symbolic integration and ongoing policies of social exclusion. In Casablanca, the tramway should integrate neighbourhoods, in which at the same time, the government is fostering the displacement of ten thousands of informal settlement dwellers towards the peripheries, beyond the city's jurisdiction. The resettled dwellers in the new towns now depend much more on modes of motorised transportation than ever before. In Jerusalem, the tramway fosters the unification of the Israeli vision of an Israeli Jerusalem by providing spatial continuity and mobility throughout the city. At the same time, the Palestinian population of East-Jerusalem remains largely excluded from Jerusalem's urban infrastructural upgrade. Palestinian infrastructure in East Jerusalem is not only neglected but also actively destroyed. The material and social infrastructure is constantly being undone in Jerusalem. By revoking residency statuses of Jerusalemite Palestinians, the Israeli authorities also target the political and social ties that Palestinians uphold with Jerusalem. Again, differences appear as well on the level of these practices: While many

- not all - bidonville dwellers welcome the move into new apartments as a sort of social rise, house demolitions, evictions and residence revocation in Jerusalem happen forcefully and with the application of heavy violence from the side of the Israeli authorities.

Following these arguments, one has to question the objective of the tramways in Casablanca and Jerusalem to improve local transport, socio-spatial integration and to reduce urban congestion beyond their symbolic usefulness. Instead, we see flagship infrastructure as expressions of a national planning hegemony that is more concerned with imagineering the world-class city than with the solution of problems related to specific local contexts of urbanisation. Moreover, the tramway lines symbolise a form of political dominance and further materialise the hegemonic visions of the nation state - woven with a discourse on urban integration. In the context of the JLR, the ongoing attacks against it show in which way Palestinian inhabitants of the city perceive the JLR as a manifestation of Israel's political claims to a united Jerusalem under Israeli control. This is further stressed by ongoing repression of political rights and expressions of the Palestinian inhabitants of Jerusalem, beyond the JLR's rather symbolic, "showcase" integration of Palestinian neighbourhoods. In the different political context of Morocco, public authorities promote the tramway as the visible symbol of a new political commitment towards previously neglected neighbourhoods, however, without engaging in more comprehensive and inclusive urban policies. Instead, the tramway has enhanced previously existing processes of urban exclusion. Thus, against the background of an increasing importance of images and representations in the marketing of cities, it is crucial to critically analyse worlding and wording practices as inherent drivers of the planning of flagship infrastructure. Seeking for legitimacy through infrastructural upscaling and city branding might increase international recognition and add to some form of legitimacy. Locally, however, it can show detrimental effects that might lead to a questioning and critique of the infrastructural projects. As such, the search for international legitimacy through infrastructure can also endanger a regime's legitimacy domestically, at least by those affected by its marginalising and excluding effects on the ground. A reading of these representative practices that showcase infrastructure as worlding strategies, as we suggested in this article, helps to understand the ambivalent practices of inclusion and exclusion, acceptance and contestation concerning urban transport innovation.

Funding:

This work was partly supported by the Ruhr University Research School PLUS, funded by Germany's Excellence Initiative [DFG GSC 98/ 3].

Declaration of competing interest:

None.

References

Abu Gous A. (2016). Surviving Jerusalem: Fifty years of neglect & daily suffering just to remain. *Palestine-Israel Journal* 21(4): 6–11.

Agence Urbaine de Casablanca (AUC) (2008) Schéma Directeur d'Aménagement Urbain du Grand Casablanca (SDAU). Available at: https://www.auc.ma/docs/124112008133350.pdf. (accessed March 2019)

Amarouche M and Bogaert K (2019) Reshaping space and time in Morocco: The agencification of urban government and its effects in the Bouregreg valley (Rabat/ salé). *Middle East - Topic & Arguments* 12: 44–54.

Amrov S (2017) Homes as infrastructures of intimacy. Available at: http://societyandspace.org/2017/ 10/03/homes-as-infrastructures-of-intimacy. (accessed March 2018).

Anand N (2015) Leaky states: Water audits, ignorance and the politics of infrastructure. *Public Culture* 27(2): 305–330.

Association for Civil Rights in Israel (ACRI) (2017) East Jerusalem. Facts and figures 2017. Available at: https://www.acri.org.il/en/wp-content/uploads/2017/05/Facts-and-Figures - 2017.pdf (accessed March 2018).

Bargach J (2011) Rabat: From capital to global metropolis. In: Elsheshtawy Y (ed.) *The evolving Arab city: Tradition, modernity and urban development*. Abingdon, New York: Routledge, 99–117.

Barghouti O (2009) Derailing injustice:Palestinian civil resistance to the "Jerusalem light rail". *Jerusalem Quarterly* 38: 46–58.

Barkat N (2010) The mayor's vision for Jerusalem. Available at: http://jcpa.org/article/the-mayors-vi sion-for-jerusalem/ (accessed March 2018).

Barthel PA and Planel S (2010) Tanger-med and casa-Marina, prestige projects in Morocco: New capitalist frameworks and local context. *Built Environment* 36(2): 176–191.

Baumann H (2016) Enclaves, borders, and everyday movements: Palestinian marginal mobility in East Jerusalem. *Cities* 59: 173–182.

Baumann H (2018) The violence of infrastructural connectivity: Jerusalem's light rail as a means of normalisation. *Middle East - Topic & Arguments* 10: 30–38.

Beaugé F (2009) Des trés riches et des trés pauvres. Available at: http://www.lemonde.fr/afrique/art icle/2009/07/15/des-tres-riches-et-des-tres-pauvres_1218998_3212.html (accessed March 2018).

Beier R (2019) The world-class city comes by tramway: Reframing Casablanca's urban peripheries through public transport. *Urban Studies*. Epub ahead of print 23 July 2019. https://doi.org/10.1177/ 0042098019853475.

Beier R (2019) Worlding cities in the Middle East and North Africa – arguments for a conceptual turn. *Middle East - Topics & Arguments* 12: 28–34.

Berger M (2017) Inside East Jerusalem's bus system for Palestinians. Available at: https://www.citylab. com/transportation/2017/08/the-long-road-to-high-speed-rail-in-israel/535860/ (accessed July 2019).

Berry-Chikhaoui I (2010) Major urban projects and the people affected: The case of Casablanca's avenue royale. *Built Environment* 36(2): 216–229.

Bogaert K (2018) *Globalized authoritarianism: Megaprojects, slums, and class relations in urban Morocco.* Minneapolis: University of Minnesota Press.

Chambre des Représentants (2013) Texte intégrale du discours de SM le Roi Mohammed VI á l'ouverture de la premiére session de la troisiéme année législative de la 9éme législature. Available at: http://www.chambredesrepresentants.ma/fr/discours-royaux/texte-integrale-du-discours-de-sm-le-roi-mohammed-vi-louverture-de-la-premiere. (accessed March 2018).

CITYPASS. Tickets and pricing (n.y.) Available at: https://citypass.co.il/en/tickets-and-prices. (accessed September 2018).

Creative Class Group (2015) Building a creative society in Jerusalem. Available at: https://www.creat iveclass.com/_wp/wp-content/uploads/2016/06/CCG-Jerusalem-FINAL-REPORT. pdf. (accessed March 2018).

Crochet JC and Leyvigne J (2008) *Royaume du Maroc Secteur des Déplacements Urbains: Note de Stratégie Sectorielle.* 1 May. Washington, DC: The World Bank.
Daniel R and Render M (2003) From mule tracks to light rail transit tracks. Integrating modern infrastructure in to an ancient city—Jerusalem, Israel. Available at: http://onlinepubs.trb.or g/onlinepubs/circulars/ec058/15_04_daniel.pdf. (accessed March 2018).
Désveaux D (2013) Tramways á la Française. Paris: Archibooks.
Dimitriou, HT (2011) Transport and city development: Understanding the fundamentals. In: Dimitriou HT and Gakenheimer R (Eds.) *Urban transport in the developing world: A handbook of policy and practice*. Cheltenham: Edward Elgar, 8–40.
Dumper M (2014) *Jerusalem unbound. Geography, history & the future of the holy city.* New York: Columbia University Press.
Easterling K (2016) *Extrastatecraft: The Power of infrastructure space.* London: Verso.
Efrat E and Noble A (1988) Planning Jerusalem. *Geographical Review* 78(4): 387–404.
Elden S (2013). Secure the volume. Vertical geopolitics and the depth of power. *Political Geography* 34: 35–51.
Farias I and Stemmler S (2012) Deconstructing ‘‘Metropolis’’. Critical reflections on a European concept. In Brantz D, Disko S, & Wagner-Kyora G (eds.), *Thick space. Approaches to metropolitanism*. Bielefeld, Piscataway, NJ: Transcript; [distributor] Transaction Publishers (Urban studies), 31-48.
Feitelson E and Cohen-Blankshtain G (2018) Public transport planning in a spatially segmented city: The case of Jerusalem. *Transportation Research Part A* 107 65–74.
Gilbert A (2008) Bus rapid transit: Is transmilenio a miracle cure? *Transport Reviews* 28 (4): 439–467.
Godard X (2011) Poverty and urban mobility: Diagnosis toward a new understanding. In: Dimitriou HT & Gakenheimer r (eds.) *Urban transport in the developing world: A handbook of policy and practice*. Cheltenham: Edward Elgar, 232–261.
Graham S (ed.) (2009). *Disrupted cities: When infrastructure fails.* Abingdon, New York: Routledge.
Gordon, N (2011) A villa in the jungle: The Arab awakening through the lens of the Israeli media. *Middle Eastern Law and Governance* 3: 105–117.
Graham S (2009) When infrastructures fail. In Graham S (ed.) *Disrupted cities: When infrastructure fails*. Abingdon, New York: Routledge, 1–26.
Graham S and Marvin S (2001) *Splintering urbanism: Networked infrastructures, technological mobilities and the urban condition.* London, New York: Routledge.
Graham S and McFarlane C (eds.) (2015). *Infrastructural Lives. Urban infrastructure in context.* London and New York: Routledge.
Haller D and Wippel S (2016) Introduction: Focus sur Tanger – Lá où l’Afrique et l’Europe se rencontrent. In: Haller D, Wippel S & Reifeld H (eds.) *Focus sur Tanger: Lá où l’Afrique et l’Europe se rencontrent*. Rabat: Konrad-Adenauer- Stiftung Maroc, 11–21.
Harvey P, Jensen C, and Morita A (eds.) (2017). *Infrastructures and social complexity.* Oxon/New York: Routledge.
Hasson N (2016) Jerusalem mayor: Cable car stop in Palestinian neighborhood will clarify ’who really owns this city. *Haaretz,* 25 August. Available at: https://www.haaretz.com/israel-news/.premium-barkat-east-jerusalem-cable-car-will-clarify-who-really-owns-city-1.5428939 (accessed March 2018).
Hasson N (2017)אורשלים. ישראלים ופלסטינים בירושלים 1967–2017 [Urshalim.Israelis and Palestinians in Jerusalem], 1967-2017 (Hebrew). Tel Aviv: Safrei Aliit HaGag.
Horovitz D (2018) The trouble with Israel’s Jewish nation-state law. Available at: https://www.times ofisrael.com/the-trouble-with-israels-jewish-nation-state-law/. (accessed August 2018).
Jefferis D (2012) The “center of life” policy: Institutionalizing statelessness in East Jerusalem. http://www.palestine-studies.org/jq/fulltext/78495 (accessed March 2018).
JNet, Jerusalem LRT Project (JNet). Jnet - get on board with success (n.y.) Available at: https://jlrt.or g.il/. (accessed March 2018).

Kingdom of Morocco (2014) *Third united nations conference on housing and sustainable urban development - Habitat III 2016: National report.* Available at: http://habitat3.org/wp-content/uploads/Morocco-National-Report-Habitat-III-Final-1.pdf (accessed March 2018).
Klein M (2014) *Lives in common: Arabs and Jews in Jerusalem, Jaffa and Hebron.* London: Hurst & Company.
Kooy M and Bakker K (2009) Technologies of government: Constituting subjectivities, spaces, and infrastructures in colonial and contemporary Jakarta. *International Journal of Urban and Regional Research* 32(2): 375–391.
Larkin B (2013) The politics and poetics of infrastructure. *Annual Review of Anthropology* 42: 327–343.
Lucas K (2011) Making the connections between transport disadvantage and the social exclusion of low income populations in the Tshwane region of South Africa. *Journal of Transport Geography* 19 (6): 1320–1334.
McFarlane C (2008) Governing the contaminated city: Infrastructure and sanitation in colonial and post-colonial Bombay. *International Journal of Urban and Regional Research* 32(2): 415–435.
McFarlane C and Rutherford J (2008) Political infrastructures: Governing and experiencing the fabric of the city. *International Journal of Urban and Regional Research* 32(2): 363–374.
Mouloudi H (2010) Reaction 'from below' to big urban projects: The case of Rabat. *Built Environment* 36(2): 230–244.
Nolte A (2016) Political infrastructure and the politics of infrastructure. *City* 20(3): 441–454.
Nolte A and Özdemir E (2018) Infrastructuring Geographies. Histories and presents in and of the Middle East. *Middle East - Topics & Arguments* 10: 5–20.
Nolte A and Yacobi H (2015) Politics, infrastructure and representation: The case of Jerusalem's light rail. *Cities* 43: 28–36.
Ong A (2011) Introduction: Worlding cities, or the art of being global. In: Roy A & Ong A (eds.) *Worlding cities: Asian experiments and the art of being global.* Chichester, Malden, MA: Wiley-Blackwell, 1–26.
Paul DE (2004) World cities as hegemonic projects: The politics of global imagineering in Montreal. *Political Geography* 23: 571–596.
Pullan W, Sternberg M, Kyriacou L, Larkin C, & Dumper M (eds.) (2013) *The struggle for Jerusalem's holy places.* New York: Routledge.
Rabinow P (1992) France in Morocco: Technocosmopolitanism and middling modernism. *Assemblage* 17: 52–57.
Rachik, A. (2002). *Casablanca. L'urbanisme de l'urgence.* Casablanca.
Robinson J (2016) Thinking cities through elsewhere: Comparative tactics for a more global urban studies. *Progress in Human Geography* 40(1): 3–29.
Rokem J, Fregonese S, Ramadan A, Pascucci E, Rosen, G, Charney I, et al. (2017) Interventions in urban geopolitics. *Political Geography* 61: 253–262.
Rokem J and Vaughan L (2018) Segregation, mobility and encounters in Jerusalem: The role of public transport infrastructure in connecting the "divided city". *Urban Studies.* Epub ahead of print 01 February 2017. DOI: https://doi.org/10.1177/0042098017691465.
Roy A and Ong A (Eds.) (2011) *Worlding cities: Asian experiments and the art of being global.* Chichester, Malden, MA: Wiley-Blackwell.
Said E (1995) Projecting Jerusalem. *Journal of Palestine Studies* 25 (1): 5–14.
Salamanca OJ (2015) Road 443: Cementing dispossession, normalizing segregation and disrupting Palestinian everyday life in Palestine. In: Graham S & C McFarlane C (eds.) *Infrastructural lives: Urbanmon infrastructure in context.* London and New York: Routledge, 114–136.
Seidemann D (2015) A geopolitical atlas of contemporary Jerusalem. Available at: Terrestrial Jerusalem. http://t-j.org.il/JerusalemAtlas.aspx (accessed March 2018).
Shlomo O (2017) The governmentalities of infrastructure and services amid urban conflict: East Jerusalem in the post Oslo era. *Political Geography* 61: 224–236.

Stern I (2018) Lana Del Rey cancels Israel show, cites inability to schedule Palestinian concert. *Haaretz*, 1 September. Available at: https://www.haaretz.com/israel-news/.premium-after-bds-pressure-lana-de l-rey-cancels-israel-show-1.6433887. (accessed September 2018).

Strava C (2018) A tramway called atonement: Genealogies of infrastructure and emerging political imaginaries in contemporary Casablanca. *Middle East- Topic & Arguments* 10: 22–29.

Von Schnitzler A (2015) Ends. In The infrastructure toolbox. *Cultural anthropology online,* 24 September. Available at: https://culanth.org/fieldsights/714-introduction-the-infrastructure-toolbox. (accessed March 2018)

Von Schnitzler A (2016) *Democracy's infrastructure: Techno-politics & protest after apartheid.* Princeton and Oxford: Princeton University Press.

Wharton L (2018) Jerusalem under Nir Barkat. Three dangerous approaches to the city's future. *Palestine-Israel Journal* 22/23(4/1): 49–56.

Wippel S (2016) La réémergence d'un carrefour interrégional: Tanger et ses infrastructures dans les réseaux transnationaux de commerce et de transport. In: Haller D, Xu F & Manibog F (2016) *Morocco urban transport sector development policy loan: Project performance assessment report.* 14 June. Washington, DC: The World Bank.

Young D and Keil R (2010) Reconnecting the disconnected: The politics of infrastructure in the in-between city. *Cities* 27(2): 87–95.

F "Ordering Movement and Mobilizing Security: On the Production of 'Critical Infrastructure.'

Published in: Distler W and Hein-Kircher H: *The Mobility-Security Nexus and the Making of Order. An Interdisciplinary and Historicizing Intervention.* Routledge (New Security Studies): 43-68.
ISBN 9781032159874

> *"Modern society has grown increasingly dependent on services such as electricity, water and gas. Industry, commerce and public facilities would not function without them. This dependency is constantly challenged by the vulnerability of these critical infrastructures, which are threatened daily by natural disasters, accidents, mechanical failures, criminal or terrorist activities, and more"* (MER Group).

This quote, taken from the homepage of one of the leading Israeli homeland security companies, illustrates the premise this chapter seeks to unpack and scrutinize: How are critical infrastructures constructed and framed in such a way that their potential vulnerability is deemed a danger for modern society. That is, what are the inherent political processes, economic interests and consequences in rendering infrastructures critical?

Against this backdrop, this chapter approaches the mobility-security nexus that this edited volume explores through a critical reconstruction of the political grounding of "critical infrastructure". At its core is the argument that infrastructures are political projects that organize movement into circulation and mobility. Infrastructures do not only constitute the material basis of movement but they are constitutive of the political organization of movement into circulation that is desired and movement into mobility that is potentially dangerous and has to be channeled or contained. Adding the concept of security to the discussion, the chapter argues that the criticality of an infrastructure is assigned to it in a process of securitization. As will be argued, it is not the security of the infrastructure itself that is constructed as "critical" in this process but rather the ordering of movement that is provided by a specific infrastructure.

Reconstructing "critical infrastructure" in this manner provides valuable insights into the nexus of mobility and security. By zooming in on how security works through infrastructural ordering processes, critical infrastructures are contextualized in the current political economy: On the one hand, the ordering of movement into circulation and mobility works through infrastructure. On the other hand, the security of infrastructure itself is mobilized as a commodity through transnational public and private alliances.

The argument unfolds in four sections into which the chapter is divided:

The first section focuses on the term "infrastructure." In building on the concept of hegemony that was developed by Antonio Gramsci and later Ernesto Laclau and Chantal Mouffe, infrastructures are introduced as political projects that manifest political hegemony and materialize into forms of everyday life. Infrastructures are thus unpacked in their capacity to work and act as "spatial software" (Easterling, 2014) : they are the driving force behind the ordering of movement into circulation and mobility as they not only channel but also actively sort movement. As such, infrastructures are active in the organization and stabilization of a specific political order in which circulation has become the desired form of movement and mobility is rendered into movement that has to be controlled, contained and stopped.

To clarify how the ordering of movement through infrastructure is understood in this chapter, the second section unpacks how movement can be differentiated into circulation and mobility. Drawing on existing literature in the field of mobility studies, the section addresses how the different forms of movement are predicated on politically ordering processes in which circulation is desired and mobility needs to be regulated.

The third section explores the attempt to render an infrastructure critical as a moment of securitization. This helps to illustrate how the political logic that is built into the infrastructure and that has sedimented into social practice and structure is reactivated in the very moment an infrastructure is rendered an object of security concerns and materializes as a "critical infrastructure". As the chapter exemplifies, this is done in cooperation between private and public actors, who work hand in hand in the production of specific infrastructure as critical. In these processes, infrastructure, as a material form of ordering, becomes a "matter of struggle". This

is, as the chapter argues, because any process of rendering infrastructure "critical" can be understood as the desire to stabilize the very political logic of ordering movement that is embedded in every infrastructure. But, at the same time, the attempt to securitize infrastructure into "critical infrastructure" can also reveal the contingency and fragility of exactly this order. Infrastructure can then also be the (plat)form on which new political struggles take shape and on/through which new political hegemonies can arise.

In the fourth and last section of the chapter, the argument that critical infrastructure is inherently about the political ordering of movement is extended. Not only are these processes of ordering stabilized through the securitization of infrastructure as "critical infrastructure", but, as the case of Israeli private security-companies illustrates, "critical infrastructure" is also mobilized as a commodity on a global security market. The last sections draws on empirical material that was gathered during the author's fieldwork in Israel between 2017 and 2019. As this chapter is based on a rather conceptual contribution, the empirical quotes illustrate the conceptual argument by highlighting how security works through movement and is increasingly "on the move" itself as critical infrastructure has turned into a commodity on a market that revolves increasingly around security.

Infrastructure as sedimented political order

> *"No one sees it because everyone has it in plain sight all the time – in the form of a high-voltage line, a freeway, a traffic circle, a supermarket, or a computer program. And if it is, it's hidden like a sewage system, an undersea cable, a fiber optic line running the length of a railway, or a data center in the middle of a forest. Power is the very organization of this world, this engineered, configured, purposed world. That is the secret, and it's that there isn't one"* (The Invisible Committee, 2015:84).

(This chapter sets out to link the concept of infrastructure with theoretical considerations of hegemony in order to show how infrastructure can be understood as political power that has sedimented into a seemingly objective social structure. As the quote above already suggests, this section seeks to contextualize infrastructure's workings within the everyday, the mundane and as a form of common sense through which a specific order is transmitted and potentially stabilized. Infrastructure, as this section suggests, unfolds its political power through its seemingly apolitical, banal technical workings. This understanding of infrastructure as a material form that works through "common sense" draws on an understanding of infrastructure as hegemony that will be explained in the following section. While infrastructure as hegemony has only been addressed reluctantly in the existing literature so far, recent work has started to scrutinize infrastructure as "important sites and technologies through which political hegemony is established, sedimented but also contested" (Westermeier and de Goede, 2021). However, important work has already been done on the link between securitization and hegemony (Broecker and Westermeier, 2019:91) that is highly relevant for the constructivist argument of this chapter. The mentioned work addresses the importance of hegemony theory in order to account for dynamics of political power in "seemingly technical financial infrastructures" (Westermeier and de Goede, 2019) and in order to account for processes in the attempt to securitize financial stability during and after the financial crisis of 2008 (Broecker and Westermeier, 2019:91).

What draws together the above-mentioned contributions in the field is their perspective on hegemony that is still indebted to Antonio Gramsci but bases the most important theoretical insights on the work of Ernesto Laclau and Chantal Mouffe. Their post-foundational understanding of hegemony still draws on Gramsci's understanding that hegemony is not a form of rule or static system of domination but rather a form of governing through consent (ibid.:94). However, rather than linking hegemony with specific historical blocs or classes, Laclau and

Mouffe understand hegemony as the outcome of contingent societal processes. If, following their work, the concept of 'society' as founding totality or 'social order' as underlying principle for social order has to be renounced because the "social itself has no essence" (Laclau and Mouffe, 2001) , society is the product of practices that seek to institute an order in a context of contingency (Mouffe, 2014:151).

As Chantal Mouffe writes:

> *"The social is constituted by sedimented hegemonic practices, that is, practices that conceal the originary acts of their contingent political institution and that appear to proceed from a natural order. This perspective reveals that every order results from the temporary and precarious articulation of contingent practices. Social order is therefore hegemonic in nature, and its origin is political. Every order is established through the exclusion of other possibilities and it is always the expression of a particular structure of power relations, hence its political character"* (Mouffe, 2014:151).

According to this understanding, everything that appears as neutral or objective "fact" of the social world rests on a political founding moment in which a specific meaning became hegemonic. Thus, the social does not rest on a fixed ground but rather on a series of fixations of meaning or as a spatialization of the temporal moment, as Oliver Marchart has suggested in relation to Laclau's work (Marchart, 2007:139).

Infrastructures are thus exactly this spatialization of the temporal moment. They are the articulation of a temporal hegemony and its fixation into a (material) spatial form. Once an infrastructure has materialized, its "form is a concrete thing that must be used: picked up, held, walked upon, sat on, turned, or pulled" (Larkin, 2018:184).

As a material and physical structure, an infrastructure works through routines and repetition. This "creates physical experiences and (.) a sensory, tactile environment that translates political rationalities into ambient experience"(ibid.). Infrastructures are thus the outcome of a hegemonic moment, yet their material embeddedness in everyday life shapes the "common sense" of those who are interpellated by it on a daily and sometimes even invisible level. Hence, political hegemony starts to work through the socio-material environment and to stabilize the political logic through which it came into being.

Because it takes time for an infrastructure to materialize and sediment into social structure and hence towards repetition, continuity and duration, it is important to acknowledge the role of (nation-)states in the provision, maintenance and expansion of infrastructural projects. In a sense, the state and its institutions themselves are sedimented social practices that have once been fixated in a political struggle and do not rest on a fixed and pre-given order.

However, as this chapter argues, infrastructure and especially critical infrastructures do not only materialize (through) the state alone: they are the outcome and medium of the constant co-production of public and private co-operations in which expertise and capital are exchanged over and through infrastructural systems and the boundaries between political and economic actors are blurred (Nolte and Westermeier, 2020). This is because "under conditions variously named globalization, neoliberalism, and the network society, infrastructure is the medium by which capital becomes the state, and by which the state accomplishes itself as an organizer of flows and bases of identity" (Barney, 2018:80). As such, the state and its institutions form a huge infrastructure that seek to invoke, infrastructural innovation, renovation and expansion in cooperation with capitalist partners based on the shared interest of generating order through infrastructure and thus the increasing demand and, in turn, also the commodification thereof.

However, because infrastructures are caught up in the relations of the state to its citizens, they might also be employed for counter-hegemonic purposes (Larkin, 2018:185). If people live under the rule of a political regime or state that does not represent them or even fights them

openly, infrastructures come to represent the oppressive regime and the services they still depend on (Nolte, 2016; Beier and Nolte, 2020). As an infrastructure's form "translates modes of rule into concrete visible structures, making them affectively real and emotionally available" (Larkin, 2018:185), infrastructures are embedded in politics (Nolte, 2016) but they are also political "as when the gap between infrastructural forces and infrastructural relations is made sensible through political action" (Barney, 2018:80). As such, infrastructures contain and materialize the contradictions and complexities of socio-political relationships and they are the medium and platform on which political contestation and critique are formed, expressed and sometimes transformed.

As this section has suggested, infrastructures are far more than merely techno-material arrangements. As the next sections suggests, infrastructures and the spaces they create "behave like spatial software" (Easterling, 2014:19) in which these spaces "are doing something" (ibid.).

Infrastructure as "spatial software"

It is one of the main arguments of this chapter that movement not only flows through infrastructure but that the socio-material conditions, embeddedness and coding of the infrastructure itself play a major role in adding, changing and sorting the movement it is supposed to channel. The apparent mundaneness of infrastructures is built on routines, repetition and background operations (if they work). This hides the sedimentation of practices that go back to a moment of political contestation and institution. But the political institution of infrastructure does not disappear. As the hegemonic articulation keeps working in and through the form and forming of infrastructures, the political moment unfolds through their everyday workings. As such, they are closely tied to movement because, most basically, "infrastructures provide the framework within which people can, or cannot move" (Korpela, 2016:113). The political moment that became sedimented into a seemingly "objective presence" (Laclau, 1990:34) structures social relations and organizes movement according to the political logic that is sedimented in the material infrastructure.

Seen this way, infrastructures, in their multiplicity and connectivity, are medium and form for movement, structuring it into desired circulation and undesired or suspicious mobilities. In this case, "a strong aspect of control and prevention (is) exercised, above all, by states" (Korpela, 2016:115). That way, infrastructural spaces do not only channel movement but also orchestrate activities that remain unstated but nevertheless consequential (Easterling, 2014:15). Like an operating system, the medium of infrastructural space makes certain things possible and other things impossible" (Easterling, 2014:14). Infrastructure, as a thing "but also the relation between things" (Larkin, 2013:329) , works through constant boundary work. This happens by translating movement into information based on assigned codes and categories and hence into circulation that is supported, wanted and needed – or mobility that is suspicious, potentially dangerous and to be contained. In channeling and translating movement into desired and non-desired forms of movement, infrastructures "reveal forms of political rationality that underlie technological projects and give rise to an apparatus of governmentality" (Larkin, 2013:328). They do so even more when they materialize as critical in a process of securitization, which is, as will be argued, an intensification of the logic of ordering that they always already entail.

The following section will explain how movement can be analytically distinguished between circulation as a desired form of movement and mobility as a potentially dangerous form of movement. This is crucial for an understanding of infrastructure's role as "spatial software" in this process of ordering and will later be linked to the notion of security that is less concerned with an infrastructure itself but rather with the ordering mechanism it provides.

Movement as Circulation or Mobility

> *"Movement has to be understood 'in the sense of the material instruments with which it must be provided' and thus through the 'bridges, roads, viaducts, railways that have strategically distributed people and things, and allowed for the 'canalization of their circulation'"* (Foucault qt. in Usher, 2014:552).

This section draws on work from Foucault (2007), Usher ((2014) and Aradau (2016) to work out an analytical distinction of movement into circulation and mobility. It introduces circulation as a desired form of movement that is aimed at free circuits of citizens, goods, data and money and mobility as a potentially subversive and unruly form of movement. It suggests that infrastructures play a crucial part in the organization of circulation and in keeping it free from any blockages, while they also produce mobility as the potentially unruly and politically dangerous form of movement that has to be channeled, contained and oftentimes also hindered. This will be helpful to then understand why infrastructures are the prime target for securitizing moves: as they organize and sort movement, they are the heart of reproducing political order. Thus, they are oftentimes rendered "critical" in order to stabilize a specific political order – a process that will be addressed in section 5 of this chapter.

Circulation – movement as productive

Recent debates in mobility studies provide helpful insights into how different forms of movement can be analyzed and understood according to the different subjectivities they produce (Cresswell, 2010). While Cresswell understands mobility as a politically mediated and bodily experienced form of physical movement (Cresswell, 2010:19), Claudia Aradau seeks to bring understandings of mobility and security together by proposing a distinction between motion, circulation and mobility. Drawing on Hobbes, Aradau argues that "the political grammar that is predicated on motion articulates sovereign power as a principle of security and the instruments of civil law as devices of ordering" (Aradau, 2016:569). While movement can be analyzed as a form of intended, teleological movement between places that requires sovereign power in order to be directed, sorted and ordered, the notion of circulation is based on the free circuit of people and things (Usher, 2014 and Aradau, 2016). As opposed to the disciplinary control over motion and movement that is associated with institutions such as schools, hospitals, prisons and factories as "opportunities to observe, catalogue and correct residents" (Usher, 2014:556) circulation is based on "the integration of populations within productive circuits of capitalism" (Aradau, 2016:569), As such, circulation became a prime target of state institutions and police in the 18th and 19th centuries and is predicated upon the idea of the "circulation of goods and possibly of men" (Foucault, 2007:325). The promotion of circulation is based on the shift from sovereign power, which is attached to a specific territory, to biopower, which Foucault understands as the "security (securité) of the population" (Foucault, 2007:65). Here, governing no longer consists of

"fixing and demarcating the territory, but of allowing circulations to take place, of controlling them, sifting the good and the bad, ensuring that things are always in movement, constantly moving around, continually going from one point to another, but in such a way that the inherent dangers of this circulation are canceled out" (Foucault, 2007:65).

According to Aradau, the securing of circulation rests on drawing the boundaries between desired and undesired movement as well as on "the correction or elimination of a population's others: vagabonds and mendicants"(Aradau, 2016:568). She draws on the interesting etymology of "mob/ility", which introduces the "the emergence of an excessive disruptive collective political subject that moves in the realm of politics" (ibid.). Mobility can thus be understood as

a politicized form of circulation that creates the need for technopolitical interventions in order to prevent a specific political order from crumbling.

Mobility as politicized circulation

For subjects and objects to circulate freely and enable the global capitalist economy to thrive, potential blockages or risks to this form of movement have to be foreseen and eliminated. Mobility as a politicized and potentially dangerous form of movement has to be either channeled into productive and controllable forms of circulation or rendered immobile. This is where infrastructure and security come into play: Movement, and the infrastructure facilitating it, become the field of intervention for a government through security where "that which needs to be addressed are 'blockages' to circulation" (Ardau, 2016:567). As blockages to circulation can derive from the movement of unwanted objects or people, they might pose an inherent danger to circulation as they hinder the logistical flow chains on which the global economy is based. Such blockages therefore have to be singled out without stopping the entire flow of objects, goods, information and people whose movement is desired.

In this understanding of mobility, the movement of a collective political subject introduces the notion of the unruly, resisting and protesting "mob" that may even endanger other forms of movement such as the free circulation of people and goods. Mobility, as understood with Aradau, in its specific political grammar, has thus to be read as a potentially dangerous form of movement that contrasts and even endangers processes of capitalist production and circulation (Aradau, 2016:569). Framed this way, mobility always entails the potential to become dangerous, even – and especially – to itself, since "the mobile 'good' or 'person' can inflict horrific damage to the surrounding material infrastructure, other humans and to the environment" and has hence increasingly come to be regarded as a source of "insecurity" (Beauchamps, 2017:1).

Thus, circulation and mobility can be said to be politically, socially and technologically mediated and differentiated forms of movement that follow different logics and forms of intervention. While circulation denotes the desirable movement of resources, citizens, data and money flows, mobility is connoted with a potentially dangerous form of movement that may jeopardize other productive circuits in a capitalist global economy.

However, these conceptual differences that the chapter draws on point to the fact that the productive movement of people and things does "not happen evenly over a continuous space like spilt water flowing over a tabletop" (Cresswell, 2010:24). Movement, be it circulation or mobility, turns the attention to the fact that "producing order and predictability is not simply a matter of fixing in space but of channeling motion" (ibid.) Thus, the distinction between motion or movement into circulation and mobility, "rather than simply allowing us to account for the broad systems of flow (…) points to the array of agents that condition this flow" (O'Grady, 2017:78). As such, the sorting of movement has to be understood through material instruments through which it must be provided" (Foucault, 2007:325) and thus through the "bridges, roads, viaducts, railways that have strategically distributed people and things, and allowed for the 'canalization of their circulation" (Foucault qt. in Usher, 2014:552).

Infrastructure and the ordering of movement

The agents that condition movement are infrastructures. Movement, as it is understood as one of the key premises of this edited volume, does not just happen. It has always been and continues to be channeled, organized and thus framed through complex political and socio-material regulations and interventions. Hence, circulation and mobility are not only produced

through different interventions into movement. Looked at from the perspective of (post-)colonial history and politics, the way populations (are) move(d) is also a process of creating and differentiating them: movement and its political regulation is thus inherently productive of political subjectivities. It does not only regulate or organize preexisting ones, but plays a big part in creating and sorting them according to political and economic logics in which biopolitical considerations regulate populations into "governable, manageable entities" (Jabri, 2011:4).

It is at this point that infrastructure comes into play. Infrastructures as "spatial software" sit at the intersection of circulation and mobility; or, put differently: they are productive of these modes of difference. As mediums of information, infrastructure's powerful activities "determine how objects and content are organized and circulated" (Easterling, 2014:13). As such, they are complicit in the biopolitical practices of ordering through which "errant populations and their movements" (Jabri, 2011:5) are rendered immobile, while the circulation of capital, commodities and citizens of some parts of the world (Global North) are not just prioritized but created as legible subjects in this process of ordering through this "grammar of circulation" (Aradau, 2016:570).

Infrastructures are forms, and forms are a matter of ordering (Larkin, 2018:184). As specific material forms, infrastructures form things, operate upon people and make them into particular sorts of subjects (ibid.). However, while infrastructure space is doing something (Easterling, 2014:14), it is not just doing anything. Infrastructures, as they order movement into circulation and mobility, wanted and non-wanted movement, and hence produce differentiated subjects, are political projects (Nolte and Yacobi, 2015; Nolte and Oezdemir 2018; de Goede, 2018). They are closely tied to the political conditions that govern their existence (Larkin, 2018:195). This means that infrastructures evolve, reproduce and stabilize the political order from which they materialize. It is thus the political logic on which they were built and which keeps working through infrastructure that movement is sorted and order upheld. In turn, they might get contested and become vulnerable as they represent and organize this specific order.

As the above sections have introduced, infrastructures constitute a sedimentation of political struggles into social practices of the everyday and, as such, do not appear as political projects that carry forward a specific logic of ordering through their sorting of movement. However, this changes when the utterance of security concerns comes into play, as the next section seeks to unpack.

Critical infrastructure

> *"The sedimented forms of 'objectivity' make up the field of what we call the 'social'. The moment of antagonism, where the undecidable nature of the alternatives and their resolution through power relations become fully visible, constitutes the field of the 'political'"* (Laclau qt. in Marchart, 2007:139).

This section suggests that the political grounding that is at the heart of every infrastructure (or infrastructural system) gets reactivated in the process of rendering a specific infrastructure a matter of security concerns. This means that some infrastructures are identified as either specifically important to local, regional, global or transnational processes (Langenohl, 2020) in the first place or that their criticality unfolds in the moment of an infrastructure's contestation. What makes an infrastructure critical is thus a "matter of struggle" (Folkers, 2018:125) and not an a priori assertion. Rendering an infrastructure "critical" is a process and "part of a complex process of political and social negotiations as infrastructure is produced politically – and is at the same time highly productive of political moments and modes of differentialization" (Nolte and

Westermeier, 2020:6). As mentioned above, infrastructure constitutes the link between movement and circulation/mobility. It not only channels movement but also organizes movement according to the political and economic value that is assigned to this movement.

Any process of rendering infrastructure "critical" can thus be understood either as the desire to stabilize the very political logic of ordering movement, which is embedded in every infrastructure, or as the momentum of the political contestation of exactly this logic. This shows that issues of security are neither an exogenous fiat nor are they objectively given, but they emerge from political constructions. It is at this point that this reading of infrastructure intersects with the process of (in) securitization. In line with Buzan/Waever/de Wilde, securitization is here understood as a "more extreme version of politicization" (Buzan et. Al, 1998:23). The main point here is the "act of saying 'security'" (Peoples and Vaughan, 2015:94) and that attempting to frame something as an existential threat or risk is more relevant than the essential meaning of the word security (ibid.). As such, the concept of securitization is explicitly constructivist: issues may become security issues by virtue of their presentation (Peoples and Vaughan, 2015:95) and "when actors 'speak security' in relation to a particular issue" (Peoples and Vaughan, 2015:103). Going beyond the notion of securitization as mere speech act theory, the securitization of "critical infrastructure is the result of intra-actions between material-discursive practices" (Aradau, 2010).

If infrastructures materialize as critical in a complex process of material-discursive practices, not every infrastructure emerges as critical in this process. Rather, the securitization of one infrastructure might happen at the expense of other infrastructures and has to do with the circulatory qualities that are assigned to a specific infrastructure.

This is because infrastructures might get securitized as the material forms in which they appear but what is at stake is the continuity of enabling the movement that is facilitated and enacted by them. Infrastructural forms enable movement on an everyday basis, be it that of electricity, water, a population's mobility or flows of information, money and data. As such, the integrated circulatory processes that are inherent to an infrastructure "appear indeed to be at the heart of the securitization of critical infrastructure" (Ardau, 2010.507).

The moment in which an infrastructure's security is brought to the fore "'the emergency imaginary' – the pervasive, always-in-the-future potential of emergency – rationalizes interventions undertaken in the interests of the health, safety, and 'well-being' of people, property, the economy and government" (Pasternak and Dafnos, 2017:10).

The reactivation of the political moment of infrastructure

The language of security that comes with utterances of "risk" and "emergency" does something to infrastructure. It reactivates the political momentum of infrastructure and the struggle of its moment of institution as it actualizes, stabilizes or contests its seemingly objective technological workings. While a "successful hegemony signifies a period of relative stabilization and the creation of a widely shared 'common sense'" (Mouffe, 2008:53), the attempt of securitization reactivates the political origins of infrastructure and lays open their contingency and openness to reformulation and redefinition.

While a state or regime, by attempting to securitize a specific infrastructure and render it critical, may aim to further fixate and stabilize its hegemony, political movements and indigenous groups may choose an infrastructure not just as platform of their political struggle but as the very object of their struggle. Indigenous communities, facing eviction from the places they inhabit or other communities who depend on forests, lakes, rivers or other natural resources for their survival, may differ enormously in their understanding of security from the assumptions

and practices of states and political regimes. In many cases, these understandings might even conflict and contradict each other.

The process of framing something in the words and terms of security brings in new actors, gives space to new political antagonisms and draws together human and non-human agents. This process of reactivation of the political grounding of an infrastructure makes for a dynamic and contingent situation. In it, new political demands are formulated and coalitions formed. However, not all of the abovementioned actors have the same power to securitize (Langenohl, 2919:37). While the political hegemony of a state is often built on decades in which the political struggle that instituted a specific regime and its order has sedimented into a social structure that appears as natural, given and objective "politics", political movements often face logistical, financial challenges in their struggle for hegemony.

The political struggle that is inherent in every infrastructure becomes reactivated and punctual "when states and their capitalist partners explicitly invoke infrastructural innovation, renovation and expansion as proof of their legitimacy and promote infrastructure as an object of ideological investment" (Barney, 2018:80). As such, security emerges as a powerful tool to stabilize and enforce a specific political order and its logic of ordering movement.

Thus, the power to securitize and hence render an infrastructure "critical" is, as this chapter will show in turn, mostly a matter of nation states in cooperation with private economic actors. As they seek to stabilize or profit from a given political order, they designate "'critical infrastructure' an object of national security" (Chua et al., 2018:618). This hegemonic political rationale according to which movement is sorted is underpinned and mobilized in powerful transnational alliances of public and private actors that stabilize the respective order even further (Vaughan Williams, 2011).

It is thus important to differentiate between securitization as a dynamic political process of contestation and a securitization as an effect – meaning that something has been securitized successfully. In the moment of successful securitization – that is, when an infrastructure is designated and treated as "critical" and worthy of protective/authoritative measures – an existing hegemony has managed to stay hegemonic. In this moment of reactivation, the political logic sediments into practices again. Accordingly, a given hegemony is stabilized and the securitized infrastructure materializes as even more policed, surveilled and fortified. "(O)nce rendered critical – an infrastructure can turn into a site of producing difference by providing the means and justification for the channelling, sorting and separating of wanted and non-wanted mobilities" (Nolte and Westermeier, 2020:6).

At the same time, a critical infrastructure is never a stable fixation that remains forever hegemonic. Even once it is securitized, the process of sorting and ordering that works through infrastructure as well as the logic of hierarchization that underpins the designation of criticality become even more apparent due to the practices of securitization. Infrastructure, once designated as critical, may therefore be more vulnerable precisely because of the very conditions of its criticality. Further, once infrastructure is deemed critical it "is 'productive' as well: it produces its own experts, threats and may bring about effects that are not intended in its production but may still result from it" (Nolte and Westermeier, 2020:11).

Critical Infrastructure mobilized

It is this moment of productivity of critical infrastructure that this chapter addresses. The successful securitization of an infrastructure as "critical infrastructure" in public-private cooperation is the attempt to stabilize the political logic of its ordering and sorting mechanisms. In many cases, the designation of "critical infrastructure" happens in the name and so-called interest of

the nation-state. However, the materialization of hegemony and its stabilization through processes of securitization has long exceeded national borders. In fact, the more it travels, the more productive this hegemony becomes as it spreads fear through a language of threat and risk that is based on the aforementioned political logic of differentialization.

Following the idea that mobility is movement that is politicized (i.e., circumscribed, controlled, channeled into wanted and un-wanted movement) through the ordering mechanism of infrastructure, the mobilization of critical infrastructure is a matter and medium of "political power that circulates "as it is technologically organized and commodified" (Invisible Committee:84).

Since it "is through movement and flow that the technologies to which security agencies are now so indebted are brought to life" (O'Grady, 2017:77), critical infrastructure is not only stabilizing the political sorting of movement but is mobilized as a political tool that is sought and sold in complex public-private security cooperation (Nolte and Westermeier, 2020).. As such, the production of critical infrastructure is explicitly understood as a joint endeavor between the state and private security actors. Critical infrastructure, as will be argued and illustrated with some empirical insights, materializes into a commodity through complex processes of securitization. Far from undermining or hollowing out the state in this process, it will be argued that the logic of rendering more and more infrastructure critical reinforces the capitalist state and its logic of ordering (Neocleous, 2007:354). The production of critical infrastructure thus reinforces the existing hegemonic order and stabilizes it as much as it serves the expansion of capital logics within this order.

In the following empirical section, this argument is illustrated with an example that looks at the production and commodification of critical infrastructure in and from Israel.

Critical Infrastructure as commodity: Security "made in Israel"

> *"What makes the Israeli system very unique is that the government does define the threats and prioritizes the risks…So when Israeli companies start working abroad, they bring this DNA and tell the organisations: ok, what are your threats? And then you usually see a client sitting and (saying): I don't know what my threats are"* (Interview 1).

This statement, taken from an interview that the author conducted with the CEO of an Israeli security company in 2019, addresses one of the important aspects that this chapter seeks to highlight: the state and the public sector in Israel work hand in hand when it comes to the production of critical infrastructure (Nolte and Westermeier, 2020). They form a partnership that is organized around the ideology of security (Neocleous, 2007:349) and have worked towards the commodification of security, which is increasingly "on the move" as Israeli security expertise, technologies and solutions are sold to an international market that seems eager to learn from best practices in Israel (Machold, 2016).

Security know-how, technology and expertise from Israel are in high demand on the international market. While the popular belief in Israeli security expertise and notions of "best practice" have been discussed and challenged (Grassiani, 2017; Machold 2015), the focus of this section lies exclusively on the mobilization of "Critical Infrastructure" from Israel to a global market. It will illustrate how "Israeli security expertise is exported and branded internationally by distributing it to other countries and thus making it mobile" (Grassiani, 2017:58), with a focus on critical infrastructure.

The abovementioned difference between circulation and mobility helps to accentuate this section in order to go beyond simplified notions of the "mobility" of Israeli security expertise. Rather, this section shows how expertise, technology and training around "critical infrastructure" is rendered mobile – and hence, how it is mobilized – by drawing on the fear of mobility of

some subjects while upholding the need for capital, data, information and other subjects to freely circulate. “Critical infrastructure” thus emanates from a process of securitization in which possible risks and threats around a specific infrastructure of national concern are mobilized and rendered a commodity. As this not only happens for “security” concerns alone, but also economic calculations, my analysis thus explores the governmental and capitalist repercussions of the global political economy of critical infrastructure.

Israeli Security DNA

In Israel, security plays a crucial role in individual and collective life as every (Jewish) Israeli is officially obliged to serve for a period in the army. After completing this mandatory military service or retiring from a successful army career, many Israelis find employment in the private security sector or establish their own private security companies. The start-up sector in Israel is booming, with new companies offering their services in the vibrant security industry (Nolte and Westermeier, 2020:6). However, these companies do not only work for private markets: they actively research, develop and produce security technologies according to the (anticipated) demands of the military and even with the mandate of the military to do so (ibid.). Thus, the limits and borders between the Israeli army as a public institution and the countless private security firms are blurred in many ways (ibid.). While many forms of cooperation between public and private actors are taking place in different sectors in Israel, these developments are more recently ‘being accompanied by the export of security expertise, including those of a specifically transnational character’ (Machold, 2016:84).

From the material gathered for this research on critical infrastructure, one interesting aspect was how the interviewees and materials highlight the concrete Israeli expertise that they base mostly on arguments of “experience” and “Israeli mentality”. Asked what exactly the Israeli system of security was that the interviewee kept referring to, the CEO of a security consultant company based in Tel Aviv answered: “a full system which allows a full cooperation between the government and the local organizations and the different methods of security” (Interview 1).

On the other hand, every interviewee was keen to emphasize the uniqueness of each case and the tailor-made solutions for every customer (Interview 2). In most cases, the interviewees emphasized the uniqueness of Israeli security expertise, praised as the “Israeli Security DNA” (Interview 1). However, they also pointed to the fact that – once hired by an international customer – the Israeli understanding of security has to be translated into the local context (Interview 1).

Another interviewee, mentioning the international projects that they had implemented, noted that some of the solutions they offer to problems presented to their company are rather generic (Interview 2). However, the uniqueness of Israeli security was emphasized when the question of risk assessment was discussed:

> *“If people ask what is the difference between Israel and the rest of the world, it's this: most organizations, cities, companies, they begin with the implementation. Everyone begins with implementation. What makes the Israeli system very unique is that the government does define the threats and prioritizes the risks…So when Israeli companies start working abroad, they bring this DNA and tell the organizations: ok, what are your threats? And then you usually see a client sitting and (saying): I don't know what my threats are!”* (Interview 2).

The quotes from the interviews emphasize Israeli security expertise while framing their offer to international customers as tailor-made solutions to every security problem.

The following paragraph shows that the production of critical infrastructure lies not so much in the mobilizing of "critical infrastructure" itself but rather in the ways in which threats are mobilized from one place to the other. As argued earlier, most of those "threats" are less concerned with the infrastructure itself, but rather with the movement that they channel, facilitate and order. This, in turn, is why infrastructures crystalize the hegemonic political and economic calculations.

"Solutions on the move" – mobilizing criticality

> *"Modern society has grown increasingly dependent on services such as electricity, water and gas. Industry, commerce and public facilities would not function without them. This dependency is constantly challenged by the vulnerability of these critical infrastructures, which are threatened daily by natural disasters, accidents, mechanical failures, criminal or terrorist activities, and more.*
>
> *Our 360° Security Solution is intelligence-driven, with a clear focus on early detection and prevention, and is based on precise planning and implementation of layered security systems that allow for centralized control of national facilities.*
>
> *Our multidisciplinary team of experts, brings rich, varied experience and a proven track record in securing a diverse range of assets, from a single facility to complex nation-wide infrastructures; supporting governments and organizations as they protect their most critical infrastructures and secure the services society requires"* (MER Group).

This quote, taken from the English website of a high-profile Israeli security provider, offers an interesting entry into the empirics of critical infrastructure production. Emphasizing the vulnerability of infrastructures by stating the increasing dependence of "modern society" on its services, the company is quick to present its ("our") solution to the problem of "securing the services that a society requires". Offering support to governments and organizations in securing a diverse range of assets through the "precise planning and implementation of layered security systems that allow for centralized control of national facilities", the company draws on a multidisciplinary team of experts with "varied experience and a proven track record" in the handling of security issues. Without further details regarding the solution at hand for critical infrastructure protection, the framing of the text purposefully obscures the complex process and different actors that are involved in the construction and production of critical infrastructure. While the text seems to assume the criticality of specific infrastructures due to their vulnerability to "natural disasters, accidents, mechanical failures, criminal or terrorist activities, and more", it does not specify what exactly it is that makes infrastructures vulnerable. However, the security solution offered allows for a "centralized control of national facilities", obviously presupposing the existence of infrastructure that has to be secured.

Asked what makes an infrastructure critical, the CEO of a big Israeli security consulting firm answered:

> *"You decide! Exactly, you decide! (…) (M)ost people use infrastructure today for power plants, nuclear plants, airports. But then when you start asking them questions, they say: ah, yes, this also! You define what is important to you. One of the most important and tough questions when you start a project like this is: what do I need to protect? The assumption is that you cannot protect everything all the time. You're gonna have different layers of security. You decide what's critical! I cannot decide for you what's critical. I can help you reach the decision, I can give you a methodology to assess your different infrastructures"* (Interview 1)

This quote is interesting as it shows that the criticality of infrastructure is contingent and up to decision making. Depending on who is in charge of deciding on the criticality of an infrastructure (and who hires the consulting company in the first place), any infrastructure could be ren-

dered critical. Yet, it is important to note that not every infrastructure gets to be critical. It depends on specific criteria that have to do with the political grounding of infrastructure and its role for political ordering and economic processes. What the CEO of the company explains here is that Israeli expertise is increasingly in demand for assessing and defining critical infrastructure and providing possible solutions for its protection. Asked what his methodology was to assess whether an infrastructure is critical or not, he replied:

> *"Data. What we ask is: How do you define a critical asset? What are the implications of losing this asset? In terms of lives, resources, business continuity, branding and reputation. Alright? Maybe if I lose the Mona Li[sa], the Eiffel Tower, the brand of losing the Eiffel Tower is a huge thing! So you make a decision!"* (Interview 1).

What becomes evident here is that private security companies from Israel, once hired, play a big part in asking the questions that will come to shape the very problem for which a solution is then provided. This shows that the materialization of infrastructure as 'critical' requires a specific expertise to accompany the process of its securitization. The assessments of security experts who imagine and simulate potential threats create the catastrophic imaginaries to which they then deliver their possible security solutions (Nolte and Westermeier, 2020:12). Or, in their own words: "The truth is, we sell it as crisis. But the truth is, it's any complex decision-making process" (Interview 1).

As such, what is sold here is not critical infrastructure itself, but the support and technologies to assess the value of a specific infrastructure. This is because any infrastructure can potentially materialize as critical in a securitization process (Nolte and Westermeier, 2020:12). What is mobilized here is less a concrete product itself, but rather the concerns and possible threats that warrant a security intervention. In light of the conceptual discussion above, it is therefore not the infrastructure itself that is at stake when the criticality of infrastructure is discussed. Rather, what unites the different infrastructures that are listed or mentioned rather arbitrarily in the quoted examples is their entanglement with movement. Importantly, this includes subjects as well as objects. Electricity also moves through grids and wires. Water moves through complex systems of pipes, pumps and tanks and thus depends heavily on the material channels of circulation. This equally applies to complex processes of industry, commerce and public facilities as they depend on the circulation of information, goods, capital and people. What is at stake here is the facilitation of borderless circulatory processes that enable the global economy. The logic of logistics that is behind these circulatory processes

> *"encroach on everyday life under the justification that rapid, efficient circulation is necessary to the welfare of the economy, the state, and its people. Yet, as both calculative rationality and a practice of spatial ordering, mainstream iterations of logistics work to promote the accumulation of capital and state power in ways that exacerbate existing inequalities and produce new dispositions of life and death"* (Chua et al., 2018:208).

Further, as one of the interviewees mentioned "business continuity" or "the Mona Lisa" as possible critical infrastructure, these processes also point to projects that aim at the infrastructure's capacity to maintain, channel or manage movement. While the continuity of business is crucial to keep the flow of information, money and data running (Folkers, 2018), a possible attack or damage to the Mona Lisa might have an effect on touristic flows and the income of money. The point is that, in light of an increasing commodification of security through the cooperation of public and private actors, any infrastructure could become critical, while only few infrastructures are actually deemed "critical". This is the case because the highly selective political grounding that is inherent in every infrastructure is reactivated in the attempt to render it critical. The political logic built into infrastructure, which underpins and organizes the ordering practices that happen through and with infrastructures, reappears. These processes of defining and securing critical infrastructure are rarely democratic processes that are in the hands of the public. What gets to be critical is decided either through processes of "privatization as a neoliberal

response to public interest" or "through securitization in the name of national interest (Steele et. Al., 2017:75)." However, as mentioned above, securitization in the name of national interest is often the outcome of privatization processes as securitization processes occur between and beyond public and private cooperation around critical infrastructure (Nolte and Westermeier, 2020). As such, "socio-economic and political interests" often operate "under the mantle of criticality" (Steele et al., 2017:76). Or, as put forward in this chapter: they work together to create this criticality.

Conclusion

This chapter argues that infrastructures are political projects that are charged with the channeling and sorting of movement and which underpin the re-production of political order. They materialize through political hegemonies that have sedimented into social practices. As they work to organize, channel and hierarchize movement, infrastructures tend to stabilize hegemonies. Yet, due to their mundaneness, infrastructures tend to appear as neutral and objective "things" as they are "just there" in everyday life. Their political logic thus plays a crucial role in the organization of productive circuits of people, resources, information, data and money, as well as the blocking of undesired mobility.

In order to contribute to this edited volume and explorations of the mobility/security nexus, this chapter zoomed in on the political grounding of infrastructure. First, it examined the sorting processes that are inscribed into infrastructures. Then, it traced how the process of securitization reactivates the political grounding of infrastructure in the attempt to further stabilize an existing political order. This moment of reactivation not only renders visible the political struggle that is inherent in every infrastructure, but also the contingent and relational character of infrastructural politics. On the one hand, this makes for the possibility of new hegemonies to materialize in the moment of the reactivation of the political rationale of infrastructure. On the other hand, existing hegemonies are not easily undone as they have materialized into powerful state institutions and capitalist interests and alliances. Once hegemonic, they constantly work towards the reproduction and reinforcement of this order.

As the final section of the chapter suggested, this is also due to the transnational mobilization of security concerns and the commodification of critical infrastructure in powerful public-private alliances. The case of Israeli security companies illustrates how they partake in the production of critical infrastructure and offer their strategic expertise in the assessment and transformation of infrastructure into critical infrastructure. This shows that critical infrastructure is not "only" about securing the desired and undesired flows and movements that are sorted through infrastructure; it is also mobilized, marketed and commodified in the global political economy of security. Common to both processes is the political logic of ordering that is inscribed in infrastructure, stabilized through securitization and mobilized on a global market through which hegemonies that materialize locally are reproduced on a global scale.

Notwithstanding the apparent inviolability of infrastructures and the political orders they perpetuate, the critical contribution of this chapter lies in excavating the political-economic logic that underpins the construction of infrastructures as critical. This is important because infrastructures are dialectical (Barney, 2018:80): Not only do they form political order, but their material form also offers manifold options for negotiation and contestation, which could help to overcome and transform the dominant political order. As infrastructures "materialize both empire and resistance" (ibid.), infrastructures should not be overlooked in their role for emancipatory political processes and their role as "infrastructures of critique" (Folkers, 2018).

This chapter therefore aimed at a critical and detailed reconstruction of the political rationales that are inherent in infrastructural processes and in the seemingly technological workings of

critical infrastructure. It is through this reconstruction that the contingency of criticality was unpacked, which could be employed in turn for progressive purposes. If securitization processes enable us to account for the political grounding of infrastructure and the moment of its reactivation, a process that Ernesto Laclau has called “dislocation” is possible. This is the moment when old hegemonies start to crumble, and new hegemonies begin to be formed in which a new understanding of security could be articulated. This would entail a rejection of criticality as a top-down process in favor of a reformulation that associates the criticality of an infrastructure to its contributions in building, sustaining and maintaining community, solidarity and sustainable futures. For this to happen, the contingent and constructed character of critical infrastructure has to be deconstructed and critical infrastructure in its current form, which works through hierarchization to stabilize a capitalist political order, has to be critiqued.

Interviews cited:

Interview 1: CEO of Israeli Security Company, Tel Aviv, December 1st 2019.
Interview 2: CEO of Israeli Security Company, Ramat Gan, November 28th.

References

Aradau C (2016) Political grammars of mobility, security and subjectivity. *Mobilities* 11 (4): 564–574.

Aradau C (2010) Critical Infrastructure and Objects of Protection. *Security Dialogue* 41(5): 491–514.

Barney D (2018) Infrastructure. *Krisis – Journal for contemporary philosophy* 2: 79–81.

Beauchamps M, Hoijtink M, Leese M et al. (2017) Introduction: Security/Mobility and the politics of movement. In: Leese M, Wittendorp S (ed.) *Security/Mobility: Politics of Movement.* Manchester: University Press, 74-89.

Beier R and Nolte A (2020) Global aspirations and local (dis-)connections: A critical comparative perspective on tramway projects in Casablanca and Jerusalem. *Political Geography*. Epub ahead of print 11 December 2019. DOI: https://doi.org/10.1016/j.polgeo.2019.102123.

Broecker H and Westermeier C. (2019) Securitization as Hegemony. In: Langenohl A and Kreide R (eds.) *Conceptualizing Power in Dynamics of Securitization: Beyond State and International System*. Baden Baden: Nomos, 91–134.

Buzan B, Waever O and de Wilde J (1998) Security Analysis: Conceptual Apparatus. In: Buzan B, Weaver O and de Wilde J (eds.) *Security. A New Framework for Analysis.* Colorado: Lynne Rienner Pub, 21–48.

Chua Chermaine, Danyluk M, Cowen D et al. (2018) Introduction: Turbulent Circulation: Building a Critical Engagement with Logistics.*Society and Space* 36 (4): 617–629.

Cresswell T (2006) *On the move. Mobility in the modern Western world*. New York: Routledge.

Cresswell T (2019) Towards a Politics of Mobility. *Environment and Planning D: Society and Space* 28 (1):17–31.

de Goede (2020) Finance/security infrastructures. *Review of International Political Economy*. DOI: https://doi.org/10.1080/09692290.2020.1830832.

Grassiani E (2017) Commercialised Occupation Skills: Israeli security experience as an international brand. In: Leese M and Wittendorp S (eds.) *Security/Mobility: Politics of Movement*. Manchester: University Press, 57-74.

Easterling K (2014) *Extrastatecraft: The Power of Infrastructure Space.* London: Verso.

Federal Ministry of the Interior (2009) National Strategy for Critical Infrastructure Protection (CIP Strategy). Berlin. Available at: https://www.bmi.bund.de/SharedDocs/downloads/EN/publikationen/2009/kritis_englisch.pdf?__blob=publicationFile&v=1. (accessed 18 October 2023).

Folkers A (2018) *Das Sicherheitsdispositiv der Resilienz: katastrophische Risiken und die Biopolitik vitaler Systeme.* Frankfurt/NewYork: Campus Verlag.

Foucault M (2007) *Security, territory, population: Lectures at the Collège de France, 1977–78.* Ed. Michael Senellart. Basingstoke: Palgrave Macmillan.

The Invisible Committee (2015) *To Our Friends: A reflection on, and an extension of, the ideas laid out seven years ago in The Coming Insurrection.* Cambridge: The MIT Press.

Jabri V (2012) *The Postcolonial Subject: Claiming Politics/Governing Others in Late Modernity.* Abingdon: Routledge.

Korpela M (2016) Infrastructure In: Salazar NB and Jayaram K (Eds.) *Keywords of mobility. Critical engagements*. New York/Oxford: Berghahn, 113-132.

Laclau E (1990) *New Reflections on the Revolutions of our Time.* London: Verso.

Laclau, Ernesto, and Mouffe C (2001) *Hegemony and Socialist Strategy: Towards a radical democratic politics.* London/New York: Verso, 2001.

Langenohl A (2019) *Dynamics of Power in Securitization: Towards a Relational Understanding. In Conceptualizing Power in Dynamics of Securitization: Beyond State and International System*. Ed. Langenohl A & Kreide R.. Baden Baden: Nomos, 2019.
Langenohl A (2020) Articulating Sovereignty within the Infrastructural Imagination: The Case of the Securitisation of Finance as 'Critical Infrastructure'. *Politikon.* Epub ahead of print 27 January 2020 47. DOI: https://doi.org/10.1080/02589346.2020.1712830.
Larkin B (2013) The Politics and Poetics of Infrastructure. *Annual Review of Anthropology* 42: 327–343.
Larkin B (2018) Promising Forms: The Political Aesthetics of Infrastructure. In: Anand N, Gupta A and Appel H (eds.) *The promise of infrastructure*. London: Duke University Press, 175–202.
Machold R (2016) Learning from Israel? '26/11' and the anti-politics of urban security governance. *Security Dialogue* 47 (4): 275–291.
Machold R (2015) Mobility and the model: policy mobility and the becoming of Israeli Homeland Security dominance. *Environment and Planning A: Economy and Space* 47 (4): 816–832.
Marchart O (2007) *Post-Foundational Political Thought: Political Difference in Nancy, Lefort, Badiou and Laclau.* Edinburgh: University Press.
MER Group (2021) "Critical Infrastructure" https://mer-group.com/solutions/critical-infrastructure
Mouffe C (2008) *The return of the political.* London: Verso.
Mouffe C (2014) By Way of a Postscript. *Parallax* 20 (2): 149–157.
Neocleous M (2007) Security, Commodity, Fetishism. *Critique: Journal of Socialist Theory* 25 (3): 339–355.
Nolte A and Yacobi H (2015) Politics, infrastructure and representation: The case of Jerusalem's Light Rail. *Cities* 43: 28–36.
Nolte A (2016) Political infrastructure and the politics of infrastructure. *City. Analysis of Urban Change, Theory, Action* 20 (3), 441–454.
Nolte A and Özdemir E (2018) Infrastructuring Geographies: Histories and Presents in and of the Middle East and North Africa. *Middle East – Topics & Arguments* 10: 5–20.
Nolte A and Westermeier C (2020) Between Public and Private: The Co-Production of Infrastructural Security. *Politikon* 47 (1): 62–80.
O'Grady N (2017) Mobility, Circulation, and homomorphism: data becoming risk information." In: Leese M and Wittendorp S (Eds.) *Security/Mobility: Politics of Movement*. Manchester: University Press, 74–89.
Pasternak and and Dafnos T (2018) How does a settler state secure the circuitry of capital? *Environment and Planning D: Society and Space* 36 (4): 739–757.
Peoples C and Vaughan Willams N (ed.) (2015) *Critical Security Studies: An Introduction.* London/New York: Routledge.
Sheller M and Urry J (2006) The New Mobilities Paradigm. *Environment and Planning A: Economy and Space* 38 (2): 207–226.
Steele W, Hussey K and Dovers S (2017) What's Critical about Critical Infrastructure? *Urban Policy and Research* 35 (1): 47–86.
Usher M (2014) Veins of Concrete, Cities of Flow: Reasserting the Centrality of Circulation in Foucault's Analytics of Government. *Mobilities* 9 (4): 550–569.
Vaughan-Williams N and Lundborg T (2011) Resilience, Critical Infrastructure and Molecular Security: The Excess of 'Life' in Biopolitics. *International Political Sociology* 5: 367–383.
Westermeier C and de Goede M (2021) *Infrastructural Geopolitics*. Unpublished manuscript.

G Reclaiming security and infrastructures: The emergence and discontents of 'Safe City' projects from Jerusalem to Bishkek

Co-Author: Philipp Lottholz, Center for Conflict Studies, Marburg.
Published in: *Security Dialogue* 57 (2026), p.155-166.
DOI: https://doi.org/10.1093/secdia/xhaf001

Abstract

This article examines the role of infrastructure in so-called 'Safe' and 'Smart City' projects. It shows how these projects address security issues selectively and can become active drivers of urban insecurity processes. We explain this with the fact that, while infrastructures are seen as integral to the security of some, they often also undermine the safety of others, a process which we conceptualize as 'infrastructured insecurity'. Providing empirical analyses from Jerusalem (Israel/Occupied Palestinian territories) and Bishkek (Kyrgyz Republic) the article illustrates how 'infrastructured insecurity' exists despite, or emerges directly from, 'Smart' and 'Safe City' projects, but also how communities challenge the exclusionary forms of security those projects imply. Infrastructures therefore prompt us to reframe and rethink different understandings and practices of security, including the creation and reclaiming of security, in and beyond the urban.

Keywords: Infrastructure; urban security; Central Asia; Israel/Palestine; community care

Introduction

Critical analyses of 'Safe' and 'Smart City' Programs (Morozov and Bria, 2018; Urban Studies, 2021; Hong, 2022) and of the wider technopolitics of urban security (Altenhain, 2023; Jaffe and Pilo, 2023; Hochmüller, 2023) have offered ample insight on the discontents of such urban security practices and governance regimes, particularly their effects on marginalized populations. Yet, how do framings of safety and security play out in these processes and, more importantly, what are the strategies, practices and successes of citizens and communities to challenge and reclaim selective and exclusionary visions and regimes of security?

This article draws on Urban Studies with an interdisciplinary take on infrastructures to deconstruct and challenge 'Safe' and 'Smart City' programs as they are promoted and implemented in urban spaces beyond Western and metropolitan contexts.[1] Looking at such projects in Jerusalem (Israel/Occupied Palestinian territories) in comparison with Bishkek (Kyrgyzstan) and the wider Central Asian context, it demonstrates how community initiatives deal with neglect, abandonment and exclusion from connectivity and smartness but also direct forms of violence and expulsion in the name of modernization and development. These include organizing alternative forms of infrastructure and service provision that preserve people's livelihoods, living space and everyday safety, thus defying and reclaiming the imaginary[2] of 'Safe' and 'Smart Cities'.

Our contribution approaches questions of urban security through an inquiry into the role of infrastructures, which have received increasing attention in both Critical Security Studies (Altenhain, 2023; van Riet and Langenohl, 2020; Nolte 2023; Aradau, 2010) and in urban studies (Anand et al., 2018; see Hong, 2022). In zooming in on infrastructures, we address them not only as selective objects of security concerns but also as active drivers in urban processes in search for more smartness and safety. This quest, as we show, also makes infrastructures forceful drivers of insecurity as they channel forms of control, profiling and surveillance that render parts of the population as unsafe and destabilize their sense of security. We conceptualize this ambivalent role of infrastructures and their effects as 'infrastructured insecurity'; a concept that we develop through a reading of critical urban studies, and particularly of research on the unequal provision and potentially violent workings of infrastructure (Datta and Ahmed, 2020; Hong, 2022; Anand et al., 2018) as well as critical and feminist approaches in security studies (see Wibben, 2020; Aharoni et al., 2022). The latter and further works on the role and radical potential of 'care' in contexts of exclusionary and violent urban regimes (e.g., Datta and Ahmed, 2020) foreground the reclaiming of security by marginalized communities and groups and thus help us chart possible ways beyond hegemonic projects of security and order.

Methodologically, we adopt a relational comparative approach that pays attention to direct linkages but is more interested in how disparate cases develop against a common background of wider global trends. Jennifer Robinson has provided the most comprehensive proposal for this approach, which seeks to overcome the widespread understanding of comparability as based on 'territorially delimited "cities", or according to features of [cities'] national contexts' (2022: 9). The latter usually results in 'comparisons of only relatively similar kinds of cities', thus belying the fact that isolating and analyzing 'independent "variables"... is at odds with the fullness and complexity of urban space' (ibid.). In line with this approach, we dialogically juxtapose processes in the semi-periphery, in this case the Central Asian city Bishkek, with Jerusalem, a context central to the hegemonic emergence of the idea of a 'Safe City', but also its contestation. The perspective from Bishkek and Central Asia provides not only a contrasting or 'most different' case to Jerusalem (cf. Robinson, 2022: 9), but one where 'Smart' and 'Safe' City conceptions and technologies developed in Israel and other global centres are received and implemented through local policy-making and translation processes that warrant critical attention. The case choice further serves to take up Tuvikene's (2016) call to acknowledge that cities in the former 'Second World' or post-socialist space are to some extent 'ordinary' and comparable across the globe, not least given their subjection to processes of neoliberal transformation and inclusion into the global political economy (Robinson, 2022: 28-29).

The article draws on Nolte's doctoral research (2017-2022) including 31 semi-structured and informal interviews and ethnographic observations and Lottholz's post-doctoral project (2019-present) with 58 interviews and insights from participatory observations and community visits. In both contexts, the anonymized interlocutors include members of community centers and initiative groups but also security practitioners (Israel/Occupied Palestinian territories) and international organizations', NGO and municipality staff as well as civil society activists (Bishkek). We follow an interpretive approach to capture people's understandings of security and safety in an experiential dimension and relate these to analyses of 'Safe' and 'Smart Cities' in expert and media accounts within and across contexts. Inevitably, as white, Western and otherwise privileged scholars there are limits as to how precise, representative and comprehensive our accounts of security perceptions in the two contexts can be, especially given security and logistical limitations on the amount of time we could stay in the communities that are subject to selective and exclusionary security provision. On the other hand, continuous contact with research partners and long-term observation of developments in the two cities and their wider context has helped us to ascertain the accuracy of our insights.

The paper continues by presenting our concept of 'infrastructured insecurity' that combines critical and feminist studies of security with the analysis of urban infrastructures. The subsequent empirical section examines how 'smartness' and 'safety' are implemented and related to infrastructured insecurity in East Jerusalem and Bishkek. The fourth section demonstrates how marginal communities deal with this 'infrastructured insecurity' through resistance, autonomous self-organization, but also cooperation with authorities. We then close with reflections on infrastructures that could help to reframe security towards a more collective, anti-hegemonic and care-centered approach.

Infrastructured (in)security in and beyond 'Safe' and 'Smart Cities'

This section conceptualizes 'infrastructured insecurity' as a key feature of 'Safe' and 'Smart City' programs across contexts. Building on Rodgers and O'Neill's (2012) conception of active and passive forms of 'infrastructural violence', it argues that 'infrastructured insecurity' is produced and constituted by such violences, including neglect and abandonment reproduced in 'Safe' and 'Smart City' projects, but is also challenged and overcome in communities' attempts to reclaim and ensure security for themselves. In the current age of largely unbridled neoliberal

urbanism, ‘Safe’ and ‘Smart’ Cities have become a pivotal socio-political imaginary[2] through which authorities and political players seek to solve social and political problems under conditions of extant privatization and austerity (Sadowski and Bendor, 2019). They have increasingly been turned into corporate and market driven ‘programs' in which global companies such as Thales Group, Huawei and Siemens (amongst many others) offer sets of practices, technologies and expertises to state, federal and municipal actors, competing for contracts in official and semi-official tenders. While the terms ‘Safe’ and ‘Smart’, in practice, are often used together and interchangeably, they do not describe the same aims, objectives and practices: The imaginary of the ‘Smart’ city has become the global buzzword of the decade (Akbari, 2022:441), promising smart and data-driven solutions in challenging urban environments. Critical academics and activists have for long emphasized the implications of smartness for surveillance purposes (ibid.) As such, programs putting forward data collection, real time coordination between authorities and the tracking of subjects and objects in the name of smartness, often in ‘extensive collaboration with non-democratically legitimized corporate actors’ have been theorized as ‘surveillance or security city’ in critical urban and surveillance studies literature (Morozov and Bria, 2018: 11; see Hong, 2022; Akbari, 2022: 441). Contrary to scholarship and expertise, urban practitioners, authorities and companies push for ‘Safe’ and ‘Smart’ City projects under the assumption that ‘Smart cities are, as a concept, safer cities’ (Huawei advertisement). ‘Safe’ City programs, as they diverge across contexts and demands, build their imaginaries on ideas of crime prevention, law enforcement technologies, infrastructure resilience (detection) and alarms and practices of predictive policing, incident tracking and recognition systems (licence plates, faces, emotions). Safety, as understood in this corporate sense, requires quick and uninterrupted access to data, information and often expands the scope of action for authorities, democratically legitimated or not. As such, our contribution supports Akbari in her claim to empirically unpack the political situatedness of smart city programs (2022: 443), tracing its interconnectedness with the imaginary of ‘Safety’ and ‘Security’ and in its relation to infrastructures. Infrastructures play a crucial role in the emergence of ‘Smart’ and ‘Safe City’ technopolitics: in the case of transport or public spaces, they are sites where insecurity and danger needs to be managed. Meanwhile, infrastructures such as telecommunication and geo-mapping also provide the medium through which people in cities are rendered trackable and hence governable and controllable (Morozov and Bria, 2018: 3).

The central role of infrastructures in urban life foregrounds our argument on how ‘Safe’ and ‘Smart Cities’ produce, willingly or not, infrastructured insecurity. As long-standing urban studies and critical infrastructure studies literature has shown, urban life is an inherently ‘infrastructural experience’ itself (Graham and McFarlane, 2015: 1). Infrastructures thus also shape mundane forms and experiences of security in cities, both in individual and collective registers. Besides the services they provide, both the presence and absence of infrastructures can generate forms of symbolic and material neglect – or even violence. On the latter, Rodgers and O’Neill (2012) offer a fruitful lens with their concept of ‘infrastructural violence’. They differentiate between active infrastructural violence which ‘focuses upon the conscious development of infrastructure to regulate normative social and territorial relations’ and, on the other hand, passive infrastructural violence, understood as ‘socially harmful effects [that] derive from infrastructure’s limitations and omissions’ (2012: 406-7). This is particularly relevant for ‘Safe’ and ‘Smart Cities’, where structural violence is built into or transmitted through infrastructure. Thus, infrastructural violence is enacted in activities like data collection, preemptive policing and arrests based on the work of CCTV infrastructures and algorithms that disproportionately affect racialized and marginalized populations (Morozov & Bria, 2018: 8; Hong, 2022: 15; Rodgers and O’Neill, 2012: 405).

On the other hand, the aspect of passive infrastructural violence hints at aspects of neglect and abandonment. Rather than outright or even intentionally violent, such situations are manifested by exclusion from infrastructures and services by insufficient extent or quality of infrastructure provision (Lottholz and Manolova, 2022). As Datta and Ahmed's study of gendered infrastructural violence in Kerala proposes, the '[a]bsence or poor quality of infrastructure' should be seen as 'embodiment and driver of violence against women in low income settlements, and other intersectionally disadvantaged citizens' (2020: 8). Similarly, Anand and colleagues demonstrate that, in its accumulation over time, the differential provision of infrastructure can amount to the reproduction of racism in the shape of exposure to health hazards and premature death (2018: 2).

This ambivalent role of infrastructures in creating security for some while at the same time transmitting or constituting violence, insecurity and danger for others foregrounds our proposal of 'infrastructured insecurity'. Adding to the critical analyses reviewed above, recent urban research on 'Smart Cities' has exhibited the selective and potentially violent ways in which infrastructures structure urban lives and livelihoods, as smart and state-of-the-art technologies can co-exist with 'modes of underdevelopment' and disregard important questions of ecology, equity and societal participation (Burns et al., 2021: 465-66; Urban Studies, 2021, especially contributions by Mouton, Irazábal and Jirón and Jirón et al.; Hong, 2022). 'Infrastructured insecurity' helps us to go beyond the exclusive focus on 'infrastructural violence' (Rodgers and O'Neill, 2012) as it helps us to not just highlight infrastructure's implication in violence, but also serves as a lens to look at the contestations, organizing and reclaiming of infrastructures based on understandings of security as care. This move is foregrounded in critical and feminist security studies which oppose dominant state-centric and police-orientated approaches to security (Wibben, 2020; Aharoni et al., 2022). These have developed an understanding of security – in our case, infrastructured security – that, as proposed by Tulumello, goes against and beyond concepts that designate security merely 'as an individual right' and considers security as collective endeavor accommodating pluralistic values and worldviews (Tulumello, 2020: 2, 10). Such a conception of security as a collective good comes to the fore in attempts of marginalized communities to organize mutual support and a minimum level of infrastructure and service provision in the absence of state support. In the context of urban and infrastructure studies, Alam and Houston have called attention to 'notions of care as alternate infrastructure', by which they mean '(non-institutional) care spaces, and the capacities of those who work and collaborate to make them' (2020: 2). Aharoni et al. conceptualize 'security as care' to 'capture how caring activities' like support with trauma and crisis situations 'are valued as a source of communal resilience' in the Israeli context (2020: 4).

In this sense, community-level care efforts can stand in resistance to and outright conflict with municipal and wider state authorities, also in the case of Smart City projects (Burns et al., 2021: 467). Both in the urban context and wider global politics, such 'caring communities' (The Care Collective, 2020: 46) or 'Communities of Care' have 'gained meaning as non-state strategies for enduring an unequal and insecure world' (Laufenberg, 2020: 99). They have a radical and transformative potential and significant historical precedents ranging from autonomist Marxist feminists to Black activists in the US (Hobart and Kneese, 2020: 5-6). Communities of Care seem to embody what urban studies scholar Abdumaliq Simone envisaged in his idea of 'people as infrastructure'; that is, a formation that, '(d)espite the extremities of eviction, displacement, and dispossession, … [is] still often able to piece together some fragile and limited versions of collective force and action' (Simone, 2021: 1344-5).

It is such practices and efforts of care through which marginalized communities and groups can counter and build alternatives to hegemonic understandings of security. Communities' attempts at rebuilding and self-organizing infrastructures and services thus aim to create forms of 'infrastructured security' that seek to challenge and overcome the insecurities manifested,

or at least left unaddressed, by ‘Safe’ and ‘Smart City’ projects. We therefore propose ‘infrastructured (in-)security’ as key concept that allows to not only analyze the inherently destabilizing and insecure character of infrastructures, as suggested in accounts of ‘infrastructured violence’, but also to grasp their inherent potential to create, shape and channel forms of collective security production as and through practices of care.

Urban (non)development and security between Safety and Smartness

From securing Jerusalem to security ‘made in Jerusalem’

The former mayor of Jerusalem, Nir Barkat, has brought Jerusalem to the forefront of urban security branding. Yet, in light of the dire situation of Jerusalem’s impoverished Palestinian population which is deprived of any political and collective right to the city, this ambition to make Jerusalem ‘smart’ and ‘safe’ is contested. Jerusalem, as this section suggests, is addressed by Israeli politicians, security practitioners and the municipality as an inherently insecure city that warrants constant security intervention. Many municipal, corporate and private actors claim to make Jerusalem ultimately ‘safe’ and ‘smart’ through many corporate-public programs and so-called security ‘pilots’, while its political status and the sociopolitical conditions of its Palestinian population is managed rather than politically solved. As Jerusalem remains politically divided between Israelis and Palestinians who both claim it as their (future) national capital, the meaning of ‘safety’ and ‘smartness’ comes to denote different things for different populations.

In East Jerusalem, 358,000 Palestinians live in a situation of structural violence, in which house demolitions, revocations of residencies and arbitrary arrests destabilize their daily existence (Shalhoub-Kevorkian, 2015). Occasionally, some Palestinians seek to counter this structural violence by committing knife attacks against soldiers, military infrastructure and also against Israeli civilians around the city and the surrounding Israeli settlements (Tzidkiyahu, 2022). These attacks, sometimes referred to as ‘lone wolve attacks’ (ibid.) are prompting harsh Israeli measures against the Palestinian population of East Jerusalem in the name of security: curfews are imposed on entire neighborhoods, preemptive searches and arrests are conducted and the houses of family members of the suspected attackers are being demolished.

Israel de facto occupied East-Jerusalem in 1967 and annexed it as part of the “Jerusalem Law”, declaring "complete and united" Jerusalem as its capital. in 1980. As such, Israel claims East Jerusalem to be part of an united Israeli Jerusalem and part of Israeli territory while it treats its Palestinian inhabitants as “residents” with “Jerusalem ID” only. However, de jure, under international law, Israel’s control over East Jerusalem is viewed as an occupation and its sovereignty over East Jerusalem is not recognized by any other country or the UN Security Council . Up until today, Israel’s governance over East Jerusalem presents a complex conundrum to Israeli security authorities who seek ‘to showcase a “normal” civilian administration to the scrutinizing gaze of the international community, and a veneer of security to the domestic Israeli audience’ (Volinz, 2018: 442). Volinz’s important analysis on security provision and actors in Jerusalem observes that Israeli state security actors have adopted modular forms of security that enable them to ‘distance themselves from the controversial policies they pursue through the interposition of ostensibly neutral enlisted actors’ (439). This, according to Volinz, also ‘replaces a nominal equality with a differentiated distribution of (in)security’ (452) between Jewish Israelis and Palestinians in Jerusalem.

Generally, municipalities in Israel are very powerful when it comes to the execution of legal authority, the employment of personnel and the use of technology. They are in charge of urban planning, construction permits and enforcement. This is especially conflictive in Jerusalem,

where the municipality's claim of legal authority over East Jerusalem also requires the collection of municipal taxes from the Palestinians to which the right of residency in Jerusalem is legally linked (Volinz, 2018: 447). Therefore, questions of infrastructural service provision in East Jerusalem are entangled with hegemonic security logics, while poverty and the absence of any political and cultural leadership have created a situation of almost absurd human insecurity.

Amidst a poverty rate of 70% amongst the Palestinian population of East Jerusalem and their lack of political representation, 'Jerusalem has become a prime example of the logic of securitization, by which policymakers recast social and political problems as security problems, to be addressed by security tools rather than social or political policies' (Hever, 2017: 105). This prevalent logic of security links Jerusalem to the national security market in Israel and to the global political economy of security in which Israel is a big player and in which Jerusalem is put at the forefront of a strategy of 'urban security branding' (Coaffee and van Ham, 2008; Beier and Nolte 2020).

Former mayor of Jerusalem Nir Barkat (2008-2018) was a key actor in developing Jerusalem into a heavily securitized city space within the 'Smart' and 'Safe City' imaginary. In a speech at an international gathering, Barkat discussed Jerusalem as a 'Safe' and 'Smart City', where 'technology meets with our philosophy to combat terror' (ELNET, 2019). He underscored that Jerusalem is one of the safest cities in the world where 'terror will never take control of the lives of the residents'. On the contrary, he suggested that other cities, especially in Europe, would have to learn a lot from the Israeli security approach to Jerusalem (ibid.).

Yet, human rights organizations observe that under Barkat's leadership, Jerusalem was turned into a city that is ruled by state, private and municipal mechanisms that come to define urban security, following a logic in which Palestinians constitute a 'security threat' (Who profits, 2016: 18). A key milestone in manifesting this securitization logic was the project 'Mabat 2000' (Hebrew for sight, vision), a collaboration of municipal and state institutions with the private Israeli security company MER LTD and its subsidiary Athena Gs3. The project was launched to establish and run the surveillance of the Old City of Jerusalem (Who profits, 2016: 11) and the adjacent Palestinian neighborhood of Silwan in which Israeli settlers increasingly occupy houses, linking their presence to the ruins of the 'City of David.' Around these settlements of Jewish Israelis, a 'smart' surveillance infrastructure has been established in which 'The combination of settlement activity and the increase in surveillance equipment erected by Israeli settlers and security forces are part of an intentional strategy to create a coercive and hostile environment to minimize Palestinian presence in areas of strategic importance in East Jerusalem, such as Silwan, in order to establish and consolidate Jewish domination and control over these areas.' (Amnesty International, 2023:57)

This 'smart' initiative entailed the installation of hundreds of CCTV cameras all over the city linked with a central command that monitors residents' movements 24/7. In 2017 this 'smart' system was upgraded, bringing in CCTV surveillance with facial recognition and the ability to analyze real time data and arrest people preemptively as algorithms may suggest them as a potential threat (ibid., 7amleh, 2020; Amnesty International, 2023). In addition, in 2019, the municipality of Jerusalem, together with SMBIT as an integrator and Siklu, a global technology provider, paved the way for building one of the largest smart city networks in Jerusalem in which a wireless broadband infrastructure known as a 'Gigabit wireless access' (GWA) network, provides high-speed Internet service in public spaces and municipal buildings and to educational institutions and thousands of security, traffic control and parking management cameras.' (IoT Now, 2019). Here the connection between the 'Smart' and the 'Safe' City become obvious, its distinction somewhat obsolete: While 'smart' infrastructure is employed in the name of efficiency and connectivity, it is increasingly also used to selectively provide 'smart'

security solutions for the Jewish Israeli settlements in East Jerusalem – and to render its Palestinian population inherently vulnerable and insecure.

While Jerusalem as a whole was turned into a highly securitized space, its mayor Nir Barkat started to commodify the city's situation of structural and ever emerging violence by selling security solutions 'made in Jerusalem'. Indeed, the 'Mabat 2000' technology is being showcased and exported internationally. The project's command center has been visited by international political representatives and homeland security personnel, who according to a former Israeli police spokesperson, 'have come and examined how the system works to learn how to use it overseas' (Who profits, 2016: 16-17; see Interview 2).

'Safe' and 'Smart City' programs are a field of specialization within the Israeli security export landscape. These programs 'draw upon the Israeli security community's self-proclaimed rich experience "on the ground,"' where 'military, security and policing are tightly interwoven with the country's private sector' (ibid.). This has distinct implications for the marketing of 'Smart' and 'Safe Cities' programs.

In overall five in-depth interviews conducted in person with Israeli security practitioners in 2019 regarding 'Safe' and 'Smart Cities' in Tel Aviv and its suburbs, they mentioned how these words have a rather performative character in politics in which safety and smartness easily become buzz words and showcased within the context of election campaigns (Interview 1). In that sense, 'Safe' and 'Smart City' programs are very much linked to business and to the global political economy of security, policing and surveillance (see Marat and Sutton, 2021). Based in large part on the situation in Jerusalem, Israel has established itself as a leading global player, whereby 'Learning from Israel' is turned into a performative slogan void of political meaning (see Machold, 2016).

The production of security 'made in Israel' cannot be fully explained without its productive 'other', i.e., the constant production of infrastructured insecurity for Palestinians in and from East Jerusalem . Infrastructure's potential for either providing security or destabilizing and disrupting people's existential security becomes very apparent in the case of Jerusalem where (in)security is dependent on racial categorization and political notions of (non)belonging: Israeli authorities employ 'smart' measures to follow, track and police the Palestinian population in the name of 'safety' that is exclusively meant to secure the Jewish-Israeli population of Jerusalem (see Shalhoub-Kevorkian, 2015:175). East Jerusalem and its Palestinian population is not only excluded from smart infrastructural services, but openly treated as the source from which security problems arise. As an effect and means of this 'infrastructured insecurity', Palestinians in East Jerusalem are heavily securitized, racialized and rendered infrastructurally insecure.

Visions and Practices of Safety and Ordering in Central Asia

Central Asia has so far received little attention in (critical) security studies (for exceptions see Lemon, 2019). At the same time, 'Smart' and 'Safe City' projects have been part and parcel of the region's governments' attempts to advance projects of grand urban design and modernity (Marat and Sutton, 2021: 244). We can thus observe similar hegemonic and exclusionary forms of infrastructured insecurity as in the case of Occupied East Jerusalem.

Bishkek presents a peripheral case within Central Asia. It is the capital of the Kyrgyz Republic, the smallest Central Asian republic that lags behind its neighbors in economic and human development. Still, despite less spectacular urban development, the real estate boom driven by foreign investment and especially migrant remittances (about 1.5 million or half of the country's working population worked abroad in Russia or elsewhere as of 2020) has manifested

similar relations of class inequality and differential access to accommodation and urban space. The increasing construction of shopping malls and 'elite' housing has bolstered gentrification and inequalities. With the increasing influx of rural migrants in the early 2000s, the population of new settlements (Russian novostroiki or Kyrgyz zhani konushtar),

established in the late 1980s when landless peasants seized land around the city, has reached about 250,000 people; almost a quarter of the overall population. While a recent presidential decree has enabled the legalization of most land plots and entire settlements, residents still need to fight, often over years and with considerable costs for private households (Community Visit 3) to be connected to utility lines, road networks and other infrastructure (Nasritdinov et al., 2015: 155). This lack of public infrastructure is perceived as a source of insecurity. For example, the lack of street lighting makes streets a dangerous place especially for women or children, was stated by activists from a civil society network 'Civic Union' (Russian: Grazhdanskii Soiuz) in interviews and in a working group meetings with city authorities (participatory observation, September 16th, 2021; Interviews 3 and 7). Yet, in contrast to this civil society network that has been working on law enforcement reform for over a decade, most residents of new settlements have little recourse in cases of conflicts, abuse or criminal offenses, as law enforcement organs and local administrations lack the capacity, and often willingness, to ensure due procedure.

Against this background, Bishkek started its first 'Safe City' project in February 2019. This project focused on setting up CCTV observation systems, command centers and fine collection mechanisms to control road traffic, similar to earlier Safe City projects in Kazakhstan in the 2000s (Lukmanov, 2013). After several irregularities, a second tender was won, eventually through a court decision, by the Russian radio engineering firm 'Vega', a subsidiary of the Rostekh corporation with close ties to Russian power elites (Yusupova, 2018). The significance of trying to establish compliance to traffic rules is indicated in the statistic of 1,032 673 violations recorded at four crossings within four weeks, with 57 percent of them paid and amounting to 686,254 650 soms (ca. 7.5 million Euros) revenue (Milohova, 2020). Overall, Bishkek residents seem to have shared the observation that traffic violations became less thanks to the cameras and the more effective enforcement of rules (ibid., Interview 4). Yet, this Safe City endeavor was special as it also featured the installation of CCTV and further technology across the whole country on key highways and in neuralgic points, including in the second-largest southern city of Osh. This represents a significant reinterpretation of the Safe City idea into a national-level effort of improving and modernizing law enforcement.

Building on this Safe City basis and after initial delays due to political turmoil, the first 'Smart City' project started off in controversy surrounding the installation of 314 facial recognition cameras by the Chinese firm Shenzhen Sunwin and another 60 by CEIEC (Tokoeva, 2018). For instance, the Public Association 'Civic Union', a subsidiary of the above-mentioned civil society network, pointed out the lack of a legal framework for this technology, which implied a violation of constitutional provisions on privacy and personal data protection.[3] A leading member of the network, a long-time police reform activist in his thirties, stated a general suspicion of the involved Chinese companies and civic activists' desire to limit their actions, but lamented that: '[T]he level of our elites is such that they don't even put questions towards the Chinese companies. Our elite is like a comprador elite, they look at whoever brings money, so then the question is how [they] can exert any control.' (Interview 4). Echoing observations on the performative nature of 'Safe' and 'Smart Cities' in Israel, the Institute of Strategic Analysis and Prognosis argued that 'the main purpose of the "Smart City" project is to score political points for political actors by attracting international capital against the backdrop of unfolding political competition. Meanwhile, the original task of optimizing the city management system loses its priority' (ISAP, 2021: n.p.).

These contradictions and the projects' focus on elite consumers and business people (Marat and Sutton, 2021: 251, 253) point to the inherent tension between attempts at shaping a modern and prestigious city and the economic realities of Bishkek and other cities in the Central Asian context. In their study Rentier Capitalism and Its Discontents, Sanghera and Satybaldieva argue that the neoliberal model has manifested class inequalities in the above cities through 'shiny business offices, modern shopping malls and elite apartment complexes' contrasting with 'undeveloped newly legalized and informal settlements' (2021: 153). Indeed, informal settlements are a phenomenon throughout the region, with the ones around Almaty, (the largest city of Kazakhstan located across the border from Bishkek) hosting around 700,000 people, or a third of the city's population, most of whom do not have access to basic services and entitlements (2021: 151). In striking similarity with the Palestinian population in Jerusalem, dwellers from these marginal areas experience infrastructural neglect in the shape of lacking infrastructures and services like paved roads, utility networks or garbage collection. In some cases, city authorities have resorted to active violence (Rodgers and O'Neill, 2012: 406) in eviction campaigns to clear land for real estate projects, e.g. in Bakai and Shanyrak in the late 2000s (Sanghera and Satybaldieva, 2021: 161 ff.), and with less success in Bishkek's new settlements (ibid.: 174 ff.). Thus, instead of being smart, let alone safe, the city authorities and their corporate partners presented a threat to the health, life and very existence of this population.

In sum, 'Safe' and 'Smart City' projects in both Bishkek and Almaty, though with differing scopes and appearances, have faced the contradiction of unequally or outright under-developed cityscapes. Rather than frameworks for high-tech and cutting-edge consumer experiences or encompassing safety as conceived by Israeli practitioners, 'Safe' and 'Smart City' appear as a vehicle of basic modernization (Marat and Sutton, 2021: 249) and to make sure to keep people 'safe "from" certain residents'; particularly from migrant populations that are considered backward and 'may interfere with aspirations for modernity' (ibid: 251, 253). Large populations are subjected to infrastructured insecurity that is aggravated by the development and investment agendas of authorities and corporate investors who promote their visions of modernity, orderliness and comfort to select target audiences.

Counter narratives and communal mobilization in 'Safe Cities'

On the margins of 'Smart' and 'Safe': Coping with infrastructured insecurity in East Jerusalem

Jerusalemite Palestinians make up at least 40% of the city's population. However they do not have Israeli citizenship and are only so-called 'residents' of the city, which means that they can lose their residential right to live in the city almost any time. This threat is very real, as the municipality often uses its legal right to revoke Jerusalem residencies (AL-HAQ, 2018). As such, the municipality, in collaboration with other state and non-state actors 'can threaten Palestinian Jerusalemites' lives with the specter of property repossession and the loss of livelihood by municipal order' (Volinz, 2018: 447).

The infrastructural development of East Jerusalem, where most Palestinians reside, stands in stark contrast to West Jerusalem, where most of the Jewish Israeli Population is located. While both Israelis and Palestinians are paying high taxes to the municipality of Jerusalem, only 12% of the municipal budget is allocated to infrastructure improvement and service provision for Palestinian residents of East Jerusalem (Nolte and Yacobi, 2015).

As infrastructures in Jerusalem are actively mobilized in a situation of urban violence (Baumann, 2021), Palestinians face a situation which we call 'infrastructured insecurity' which encompasses but also goes, as we argue, beyond notions of 'infrastructured violence'. The as-

pect of infrastructural neglect is manifest in East Jerusalem's lack of basic services like garbage collection, water provision, traffic signs and paved roads, not to mention enough classrooms for education and spaces for communal life and recreation. This passive form of 'infrastructural neglect' adds up to active forms of 'infrastructural violence' (Baumann, 2021: 207), such as the involuntary inclusion into expansive Israeli infrastructural projects. For instance, the Light Rail project connects Jerusalem across the internationally recognized border or 'Green line' and has thus become a very controversial and contested means of mobility in Jerusalem as it materializes the Israeli claim over the entire city as a 'united city' (Nolte and Yacobi, 2015).

This combination of active and passive forms of violence (Rodgers and O'Neill, 2012: 406) constitutes a situation of 'infrastructured insecurity' and can be grasped in more detail in the Palestinian neighborhood of Silwan, located in a valley south-east of the old city of Jerusalem. The neighborhood is troubled with the presence and activities of the City of David project, an archaeological park run by the Israeli organization Elad, which actively helps to settle Jewish Israelis in the heart of Palestinian neighborhoods (Lecoquierre, 2022: 5). This has long been silently accepted and is nowadays more and more openly supported by the Israeli government and the Jerusalem Municipality. The settlers are provided with 24/7 private security and CCTV surveillance that are managed through a spectrum of private and public security providers (Volinz, 2018) as part of the above explained 'smart' Mabat project.

In contrast to the efforts around the City of David project, the municipality hardly allocates any budget for the improvement of infrastructure in Silwan. A case in point is the public transportation system, which in East Jerusalem is run by Palestinian bus companies, yet overseen by the Israeli municipality in a semi-formal and complex collaboration (Kerzhner, 2022). Commuting on public transport to West Jerusalem, where many Palestinians are part of the (non-formal) job market, is thus very difficult. In addition, Palestinian women especially do not feel safe using Israeli public transportation (Interview 5, Interview 6).[4] CCTV and security personnel monitor and target Palestinian presence in West Jerusalem and in East Jerusalem, collecting data about movement patterns and potential political organization (Amnesty International, 2023: 51 ff). Regarding the safety of using public transport in Jerusalem, one interlocutor mentioned groups on social media in which Palestinians jointly assess if using public transport, especially in West Jerusalem, is safe for them. According to her, 'people all the time ask "do you feel safe today to go by train or not" whenever it's (there is a problem) in the city' (Interview 5).

The aspect of active violence within the spectrum of infrastructural insecurity is most obvious in home demolitions. Palestinian homes in Silwan (and East Jerusalem in general) are under constant threat of being demolished. Demolitions are justified with claims that the houses do not have building permits or in order to collectively punish the families of Palestinians who committed terror against Israel to supposedly deter people from turning to violence (UNRWA, n.d.). These demolitions expose entire families to 'infrastructured insecurity' as they 'lead to a significant deterioration in living conditions. Families and communities face increased poverty and long-term instability, as well as limited access to basic services, such as education, health care, water and sanitation' (ibid.). These actions impact on the social fabric of Palestinian life in East Jerusalem and put its population into a limbo of uncertainty of potential loss and emotional and physical trauma (Shalhoub-Kevorkian, 2015: 90). The municipality and the policy rely heavily on data collected by 'smart' infrastructure in order to carry out these house demolitions. As they monitor and collect real time data which is connected to servers which can then analyse movement, Palestinian behavior is monitored and acts of 'terrorism' punished with the demolition of entire family homes. Critical voices have pointed to the broad understanding of acts of terror in Israel in which stone throwing or carrying a knife can lead to arrests without trials or the demolition of homes (+972 Magazine 2023).

These ‘smart’ technologies of surveillance equally apply to so-called ‘preemptive policing’ which is carried out in the name of ‘smart’ city programs: information gathered from the Mabat CCTV system is analysed, stored and organized around the collection of data on Palestinian individuals and groups, allowing for the random arrest of Palestinians any time (Amnesty International, 2023:57). This situation weighs especially hard on Palestinian women and girls as it affects ‘their choices concerning marriage, education, work, pregnancy, child rearing, schooling and the like’, which demonstrates the inherently gendered nature of Israeli security hegemony analyzed by Nadia Shalhoub-Kervokian (2015: 102). This is also reflected in the words of the head of one community center in Silwan in one of our interviews via Zoom in November 2022:

> School girls are being arrested. So it’s the reason for a lot of people to, you know, leave them (home), thus she will drop out of school. She will stay one year (at home), and then she will get married. And the problem is that after two years, she will get divorced. Yeah. Because she’s a child…, it’s affecting a lot of our social fabric (Interview 6, see also report from Baumgarten-Sharon, 2010; MIFTAH, 2020 on arrests of minors in East Jerusalem).

These preemptive or punitive arrests are a regular means to deter Palestinians in Silwan from political organizing, protesting and gathering. This is part of a strategy in which any attempt to protest the political, social and economic situation in East Jerusalem is addressed as a severe security threat. This is being done in powerful cooperations between Israeli security agencies, the police and the Israeli municipality who effectively carry out punishment in cases of Palestinian political activism and resistance (Volinz, 2018: 444), which renders affected individuals and families more insecure and thus aggravates the display of ‘infrastructured insecurity’ faced by the wider Palestinian population in the district. As the municipality of Jerusalem is one key player in the infrastructured insecurity and securitization that Silwan experiences (ibid.), Palestinians have nowhere official to turn with requests for improvements of services or complaints.

Coming back to Akbari’s notion on the political situatedness of smartness (Akbari, 2022), in East Jerusalem the smartness of countless cameras, monitors, servers and police personnel and private security clearly follow the logic of what Amnesty International (2023) has labeled ‘Automated Apartheid’. ‘Smart’ and ‘safe’ technologies and infrastructure are meant to protect the existence of some- in this case Jewish Israelis- while they render Palestinians inherently homeless, stateless and hence in a status of existential insecurity.

Despite their oftentimes desperate situation, Palestinian residents of Silwan have developed strategies to counter these forms of infrastructural violence by seeking and providing forms of collective and communal (infrastructural) security. One important actor in this effort are humanitarian and legal support centers that are run by international NGOs, mostly organized on a community level and funded by international donors, although increasingly restricted by the Israeli government.

Community centers assume a very important role in East Jerusalem and Occupied Palestine in general, as collective organizing has a long history in the struggle for self-determination (Lecoquierre, 2021). They provide essential services to the community as they organize children activities like summer camps, music schools, vocational training, but also social work, legal advice and psychosocial support. Often, the borders between their ‘professional’ work and personal engagement are blurred, as the people are all coming from the same neighborhood and come to help each other in situations of crisis. As such, it is a declared goal of some activist groups and associations to actively work in their neighborhood to improve the quality of life, to develop the interpersonal bonds in order to strengthen the community ‘in an effort to make daily life possible, or a bit more “normal”’ (Lecoquierre, 2021: 169). In doing so, these community centers assume a very important role in establishing and maintaining a sense of

security and in creating and safeguarding ‘spaces of sociability that participate in the public sphere’ (ibid.).

Interviews with community activists and employees of community centers in Silwan and all over East Jerusalem revealed that women play a key role in this community building and in the provision of care. They are trained to help within the framework of so-called ‘emergency groups’, which provide important support to families where social workers lack the capacity, as the head of a community center in Silwan explained: ‘(S)o the women themselves are trained for doing interventions and home visits for the family. They’re also giving a lot of support in case of demolition, in case of arrest and if, God forbid, someone was killed. (...) So our women in the group are focusing on Silwan because it’s their neighbors, their community, their families’ (Interview 6).

The work of the community centers and the women working for and around these centers are confronting the effects and social impacts that the infrastructured insecurity in Jerusalem creates for Palestinians. They have become a ‘caring community’ in a sense that they ‘provide members with a range of mutual support, from neighborliness to, for instance, coronavirus mutual aid groups’ (The Care Collective, 2020: 46). As they compensate for services and aid that the Israeli authorities fail to provide, Palestinian community centers ‘help to re-establish social ties which are damaged by strong tendencies to suspicion and by the constant pressure on the inhabitants’ (Lecoquierre, 2021: 177). While the importance of this community work is frequently emphasized, it is clear to everyone involved in the work of community centers that it is the absence of any political actor or representation as well as the lack of municipal responsibility that pushes people into forms of self-organized support structures (Interview 5).

While this community work impacts positively on Palestinian lives in Jerusalem, as many interviewees mentioned, it can only partly mitigate the plight that Palestinians face in light of the infrastructured insecurity that they are exposed to. The ‘Communities of Care’ in East Jerusalem, in which the lack of basic service provision is compensated for by informally organized mutual communal support, do not only exist because of the Israeli occupation of East Jerusalem. They also exist as long grown networks of solidarity among Palestinians in face of the absence of a Palestinian state or the Israeli government that acts in their service. As such, these practices are performed to embody alternative visions of security in which ‘Communities of Care’ challenge and eventually replace hegemonic, state-centered and ethno-national versions of security (Laufenberg, 2020).

Contesting and extending the Safe City in Bishkek

Although less distinctive along ethno-territorial lines, a similar pattern of infrastructural insecurity and contested understandings of safety in ‘Safe’ and ‘Smart City’ projects emerge in the cases of Bishkek and Central Asia in general. Located far from the city centre and unlikely to benefit from the Safe and Smart City initiatives, Bishkek’s informal settlements are notorious for the illicit land seizures made by poor rural-urban migrants in the context of the 2005 and 2010 revolutions that shook the country (Sanghera and Satybaldieva, 2021: 173-5). The slow progress in legalizing land plots has foregrounded persistent conflict with law enforcement and city authorities (ibid.) and with the wider city population that stigmatizes new settlement residents as being unruly and uncivilized (Nasritdinov et al., 2015). This conflict potential, widespread crime and risks of ill-health and poverty made international organizations working on peace and security in Kyrgyzstan’s rural regions increasingly turn to the capital’s surroundings to improve the situation of infrastructural insecurity in new settlements discussed above. A good example is a major project involving the United Nations Populations Fund (UNFPA), UN Office for Drugs and Crime (UNODC), UNICEF and 14 NGOs under the title ‘Addressing Social

Disparity and Gender Inequality to Prevent Conflicts in New Settlements' (UNFPA, 2020). It targeted ten new settlements to improve infrastructure, local administration and civic participation and particularly the situation of women and girls.

Lottholz analyzed the project through on-site interviews and participatory observation with involved stakeholders. Prior contacts to the UN agencies and implementing NGOs secured the necessary trust and access, including to community-based organizations in new settlements. Most interactions were conducted in Russian, which is the prevalent language in international project contexts, while Kyrgyz-Russian translation was provided by resident activists in community visits 1 and 3. The aim of the UN Agencies and their NGO partners to 'give citizens a stake in a positive future within their communities' (UNFPA, 2020: 12) meant acknowledging that residents experience the lack of infrastructure like street lighting or paved roads as a source of insecurity.

Given the widespread lack of functional infrastructure, the repairing, paving or asphalting of residential area streets were seen as important improvements brought by the UN project (Vesti.kg, 2019; Civic Union, 2019). The installation of street lighting was mostly undertaken by community-level initiatives, including youth groups within the projects, who raised funds to equip central roads with LED lights, which in one community prompted other residents to 'illuminate other streets at their own expense' rather than 'wait[ing] for the state', told one NGO worker curating the initiatives (Interview 7). Moreover, the limited approachability and competence of law enforcement structures was addressed by upgrading offices and electronic equipment, training officers in target communities and by providing free legal consultations (UNFPA, 2020: 40, 45). Further improvements of equipment and awareness-raising in the education and health sector, the building of playgrounds, sports pitches and communal spaces aimed to create a more friendly and activating environment and better state services.

Overall, despite the short duration of two years and focus on 10 out of 49 official new settlements (UNFPA, 2020: 51; Lottholz and Manolova, 2022), this project made an important contribution to changing the prevalent understanding of safety and security. As is often the case, both the UNFPA-based project coordinator and implementation NGO spokespeople admitted that some efforts at mobilizing communities to propose, plan and implement changes suffered setbacks and provoked disappointment (Interviews 8, 7). Yet, the continued activity of initiative groups, like in the new settlements Ak-Bata, Muras-Ordo or Ak-Ordo beyond the project framework, attests to the collective energy galvanized by the project (Community Visits 1, 2 and 3). In conversations in these communities, local residents, middle-aged and most of them women, reported that further initiatives to build key infrastructures like paved roads, canalization and a new school building were underway, although the overall situation was still challenging and did not compare to inner city districts (Ibid.).

The efforts of the project consortium built on the long-standing experience of community-based NGOs like the Child Protection Centre or Arysh, who have helped to address 'infrastructured' and other insecurities since the 1990s. These efforts had already achieved the paving of roads and installing of water pipes, toilets, and canalization in numerous settlements. During three community visits accompanied by an activist from the Public Association Arysh, senior residents with long-term activist experience told about their self-organizing of garbage collection and utility lines maintenance and about the organization's approach of creating self-help groups for residents to learn to articulate interests and needs and involve the necessary partners (Community Visit 3).

Besides basic infrastructures and services, a key aspect in ensuring safety both in the above UNFPA-led project and other initiatives is the use of CCTV surveillance for preventing and more effectively investigating crimes. The widespread belief in the reliability and necessity of this technology appeared to be part of a techno-solutionism that also underlies 'Safe' and

‘Smart City’ initiatives. In the above UN project, CCTV was installed in two new settlements and across the Oktyabrskii and Pervomaiskii districts (Civic Union, 2019: 18). A Pervomaiskii district administration representative reported that 67 cameras were installed during this and an earlier project partnerships with UNODC, with further extension on the initiative of panel bloc resident associations (TSZh), who themselves ‘are interested because first of all it is [about] personal safety’ (Interview 9). These prior projects also included the erection of fences and entry gates into courtyards (Civic Union, 2018: 61-21) which both new settlement and panel bloc residents described as effective means to prevent theft and vandalism and aid police investigations (Community Visit 1, 2 and 4). It may thus be argued that this praxis of extending the Safe City suggests a narrow and containment-oriented understanding of safety. Yet, rather than simply affirming the Safe City, community activists challenge the exclusive and performative character of Bishkek’s ‘Safe’ and ‘Smart City’ projects and thus reclaim and try to ensure infrastructured security for themselves.

The observations from Bishkek mirror patterns of urban policy and its contestation across Central Asia (see e.g. Sanghera and Satybaldieva, 2021). The region’s second-largest city Almaty shares even more uncanny parallels with Jerusalem. In the 2006 ‘Shanyrak events’, authorities’ attempts to seize control of land led to demolition of 500 houses, a confrontation with 1,000 special armed forces and a hostage crisis with one police officers set ablaze and eventually dying (Sanghera and Satybaldieva, 2021: 161). The later involvement of the National Security Committee (KNB) and Prosecutor’s Office alongside labelling of the alleged protagonists of the hostage taking as ‘terrorists’ demonstrated the significance of this land conflict (ibid.: 162). More recent programmes like the 2020 Complex Development Plan ‘New Almaty’ and the ‘Almaty city development program 2025 ’, totalling 12 billion Euros (6.1 trillion tenge), including ‘Smart City’ digitalization measures worth 203.4 million Euros and a ‘Safe City’ component of 54.9 million Euros (Akimat Almaty, 2022: 232, 240-241) signal a more comprehensive approach that benefits the population of new settlements.

However, both in Almaty, Bishkek and other cities like Dushanbe, Tashkent and Ashgabat, it remains questionable if such infrastructural upgrading will not entail higher taxes and service fees levied by the city administration and, in combination with unbridled rent rises, might thus lead to the further displacement of economically weak residents. Therefore, even if economically weaker and marginal populations attempt to extend and claim the infrastructural security propagated in Safe City projects amid municipalities’ endorsement and support, the impression of pro-business and elite bias of Safe and Smart City projects in Central Asia remains.

Conclusion: Security in and against ‘Safe’ and ‘Smart Cities’

In this paper, we have conceptualized ‘infrastructured insecurity’ as visceral aspects of urban security processes and ‘Smart’ and ‘Safe Cities’ in particular. We have thus offered an extension of existing critical studies of infrastructures and their ambivalent role in producing in-/security in urban and wider societal contexts (e.g. Datta and Ahmed, 2020; Hong, 2022; Anand et al., 2018), thus also adding to evolving critiques of technopolitics and techno-solutionism in critical security studies (Altenhain, 2023; Jaffe and Pilo, 2023; Hochmüller, 2023; Marat and Sutton, 2021). Building on Rodgers and O’Neill’s (2012) conception of active and passive forms of ‘infrastructural violence’, we have argued that ‘infrastructured insecurity’ is produced and constituted by such forms of violence, but is also challenged and overcome in communities’ attempts to reclaim and ensure security for themselves.

We have demonstrated how the rather fuzzy and diffuse ‘Smart’ and ‘Safe City’ projects in Israel/Occupied East Jerusalem and Bishkek and wider Central Asia produce highly selective and exclusive experiences of safety and smartness. In these urban settings, safety is not for

all: the safety of some population segments is pursued at the expense of those on the urban or societal margins who are subjected to 'infrastructured insecurity'. Thus, whether it is Palestinian residents from marginalized neighborhoods of Occupied East Jerusalem or informal settlement residents in Bishkek, our analysis has demonstrated that 'Smart' and 'Safe City' projects do not improve their experiences beyond road traffic or more convenient transport services. On the contrary, investments usually do not, or only belatedly, reach marginal districts, leaving them neglected in all cases, while, especially in Jerusalem, newly emerging surveillance technology and security practices have served to contain undesired populations from certain, more central city areas in direct ways (e.g., through profiling and controls). Worse so, authorities' attempts to drive out residents to make way for expanding Israeli settlements in Occupied East Jerusalem and the general enforcing of rules in Bishkek have arguably rendered marginal districts unsafe, especially for people resisting evictions and land seizures.

In contrast to these forms of infrastructured insecurity, the paper has explored alternative visions of 'infrastructured security' that contest and resist hegemonic and exclusionary conceptions of security. Thus, community-level initiatives, semi-formal and formal bodies and a wide range of civil society actors engage in practices that serve to maintain, re-establish and sometimes reclaim infrastructures and services to overcome forms of 'infrastructured insecurity'. These counter-hegemonic alternatives or 'Communities of Care' squarely map on to, or resonate with, feminist conceptions of security as care. The analyzed initiatives and their practices display different levels of resistance, contradiction and confrontation to state approaches to security and 'Smart' and 'Safe City' projects. Jerusalem presents a case of exclusionary security challenged by local residents, while some community efforts in Bishkek exhibit the desire to extend at least some of the Safe City measures from the center to their own districts. Across these contexts, 'Communities of Care' demonstrate how 'infrastructured insecurity' can be challenged and overcome towards inclusive and encompassing forms of security. In Bishkek and wider Central Asia, these efforts confront ideas of corporate-driven economic growth with unforeseeable benefits for poor strata of society living in informal settlements. In Jerusalem, the exclusion from security and targeting as security risks works along clear ethno-national lines. United Nations agencies and international NGOs have played and important role in facilitating efforts to widen and reclaim security in both contexts. Furthermore, as observed in other contexts (Datta and Ahmed, 2020; Alam and Houston, 2020), women are not only the social group more affected by infrastructural insecurity, but also play a central role in trying to cope with and overcome such situations.

People's efforts to build secure communities and livelihoods in situations of abandonment and encroachment of regressive urban and political regimes affirm the idea of a pluralist and agonistic conception of security, as suggested by Tulumello (2020) and in wider critical and feminist security studies. It thus appears imperative to 'take the desire for security seriously' and acknowledge that security, conceived as 'a certain degree of freedom from threats', is a right that all people in a political community should be able to exercise (Tulumello, 2020: 2, 6). Infrastructures, as this paper and a rapidly growing body of thought suggests, are crucial in this endeavor of thinking and doing security in the pluralistic and agonistic way suggested by Tulumello. Their relational character enables us to think of security as a collective good, as belonging to no one and to everyone at once. Therefore, infrastructures, reappropriated and centered around notions of care, are not only a medium for exerting power and violence, but also for re-thinking 'safe', 'smart' and other ways of urban life beyond the hegemonic mode of their current existence.

Acknowledgements

We thank foremost our research partners in Israel/the Occupied Palestinian territories and in Kyrgyzstan for their time and efforts to help make this research happen. The paper has benefitted from comments and discussion at a workshop held at the Collaborative Research Centre "Dynamics of Security" (2020), within the CRC's Subproject C05 "Political Security and Economized Infrastructures" and at the British International Studies Association conference panel in Newcastle, UK (2022). Many thanks to the Reviewers and to the Editorial Team at Security Dialogue for their persistent commitment to help develop this contribution.

Endnotes

[1] We hence cast these projects in inverted commas and understand them, in line with the cited literature, as two interrelated bundles of tools, practices and concepts, which variously put more emphasis on consumer-friendliness and commerce (Smart Cities) or prevention and deterrence of terrorism and crime (Safe Cities).

[2] We use the term ‘imaginary’ here in order to differentiate the ways the ‘Safe’ and ‘Smart’ City programs are being imagined, represented and sold and in order to avoid the impression that we side with this depiction.

[3] Public Association ‘Civic Union’ https://www.facebook.com/reformakg/posts/4450488421703571 (Accessed: 24 April 2023).

[4] Amina Nolte spent around 2 months in Jerusalem between the years 2015 and 2017, doing ethnographic research, conducting semi-formal and informal interviews and walking in the neighborhoods. Many interlocutors were also contacted again after the research visit and interviews were followed up on Zoom until December 2022.

Bibliography

7amleh (Haifa) (2020) Facial Recognition Technology & Palestinian Digital Rights. 21 May. Available at: https://7amleh.org/2020/05/21/facial-recognition-technology-and-palestinian-digital-rights (accessed 21 April 2023).

+972 Magazine (2023) Explainer: Israel expands power to strip Palestinians of citizenship and residency. 20 February. Available at: https://www.972mag.com/citizenship-residency-revocation-explainer/ (accessed 5 May 2025).

Aharoni SB, Sa'ar A and Lewin A C (2022) Security as care: communitarianism, social reproduction and gender in southern Israel. *Feminist Theory* 23(4): 444–466.

Akbari A (2022) Authoritarian smart city: A research agenda. *Surveillance & Society* 20(4): 441–449.

Akimat Almaty (2022) Almaty city development program 2025 and medium-term outlook to 2030. https://www.gov.kz/memleket/entities/almaty/documents/details/344101?lang=ru (accessed 28 April 2023).

Alam A and Houston D (2020) Rethinking care as alternate infrastructure. Cities 100 102662.

AL-HAQ (Ramallah) (2018) Punitive residency revocation: The most recent tool of forcible transfer. 17 March. Available at: https://www.alhaq.org/advocacy/6257.html (accessed 21 April 2023).

AL-HAQ (Ramallah) (2020) COVID-19 and the Systematic Neglect of East Jerusalem. 14 July. Available at: https://www.alhaq.org/publications/17118.html (accessed 28 April 2023).

Altenhain C (2023) Networked security in the colonial present: Mapping infrastructures of digital surveillance and control in São Paulo. *Security Dialogue* 54(1): 21–38.

Amnesty International (2023) Automated Apartheid. 2 May. Available at: https://www.amnesty.org/en/documents/mde15/6701/2023/en/ (accessed 04 May 2025).

Anand N, Gupta A and Appel, H (eds) (2018) *The promise of infrastructure*. Durham: Duke University Press.

Aradau C (2010) Security that matters: Critical infrastructure and objects of protection. *Security Dialogue* 41(5): 491–514.

Baumann H (2021) Infrastructural violence in Jerusalem: Abjection, incorporation, and resistance in the "Cyborg City". In: Navaro Y et al. (eds.) Reverberations. Violence across time and space. Philadelphia: University of Pennsylvania Press, 207–232.

Baumgarten-Sharon N (2010) Caution: Children Ahead! The Illegal Behavior of the Police toward Minors in Silwan Suspected of Stone Throwing. B'Tselem – The Israeli Information Center for Human Rights in the Occupied Territories. December 2010, Available at: https://www.btselem.org/download/201012_caution_children_ahead_eng.pdf (accessed 04 May 2025).

Beier R and Nolte, A (2020) Global aspirations and local (dis-)connections: A critical comparative perspective on tramway projects in Casablanca and Jerusalem. *Political Geography* 78: 102123.

Burns R, Fast V, Levenda A and Miller B (2021) Smart cities: Between worlding and provincialising. *Urban Studies* 58(3): 461-470.

Coaffee J and van Ham P (2008) "Security branding": The role of security in marketing the city, region or state. *Place Branding and Public Diplomacy* 4(3): 191–195.

Datta A and Ahmed N (2020) Intimate infrastructures: The rubrics of gendered safety and urban violence in Kerala, India. *Geoforum* 110: 67-76.

ELNET (2019) 'Safe & Smart City Conference'. 15 January. Available at: https://elnetwork.eu/country/israel/safe-smart-city-conference/ (accessed: 28 April 2023).

Graham S and McFarlane C (eds) (2015) *Infrastructural Lives: Urban Infrastructure in Context*. London: Routledge.

Hever S (2017) *The Privatisation of Israeli Security*. London: Pluto.

Hobart HJK and Kneese, T (eds) (2020) *Radical Care*. Durham: Duke University Press.

Hochmüller M (2023) Assembling prevention: Technology, expertise and control in postwar Guatemala. *Security Dialogue* 54(1): 54–75.

Hong C (2022) "Safe Cities" in Pakistan: Knowledge infrastructures, urban planning, and the security state. *Antipode* 54(5): 1476–1496.

Institute for Strategic Analysis and Forecasting (ISAP) (2021) Smart City Project in Kyrgyzstan as a Virtual Policy Tool. 29 October. Available at: https://isap.center/analytics/69 (accessed 24 April 2023).
IoT Now (2019) Jerusalem building one of the largest smart city networks using 'Gigabit Wireless Access' equipment. 19 November. Available at: https://www.iot-now.com/2019/11/19/100036-jerusalem-building-one-largest-smart-city-netw orks-using-gigabit-wireless-access-equipment/
Jaffe R and Pilo F (2023) Security technology, urban prototyping, and the politics of failure. *Security Dialogue* 54(1): 76–93.
Kerzhner T (2022) Formalization of East Jerusalem public transport: Mobility, politics and planning. *Journal of Transport Geography* 105: 103463.
Langenohl A and Van Riet G (2020) Security infrastructures. *Politikon* 47(1): 1–3.
Laufenberg M (2020) Radical care and the future of the Welfare State: Contours of a paradoxical politics of care. *BEHEMOTH A Journal on Civilisation* 13(2): 1048.
Lecoquierre M (2021) *Emplaced Resistance in Palestine and Israel: The Cases of Hebron, Silwan and al-Araqib*. London: Routledge.
Lemon E (ed.) (2019) *Critical Approaches to Security in Central Asia*. London: Routledge.
Lottholz P and Manolova, P (2022) The politics of urban underdevelopment in Kyrgyzstan and Bulgaria: Community-level self-organization in the absence of infrastructures and services. Connections. A Journal for Historians and Area Specialists. Available at: https://www.connections.clio-online.net/article/id/fda-133276 (accessed 28 April 2023).
Lukmanov O (2013) The "Safe City" in Kazakhstan - a brief historical overview. Frontier, 13 April. Available at: https://ru-bezh.ru/arts/zhurnal-1/bezopasnyy-gorod-v-kazahstane-%E2%80%94--kratkiy-istor icheskiy--obzor (accessed 28 April 2023).
Machold R (2016) Learning from Israel? "26/11" and the anti-politics of urban security governance. *Security Dialogue* 47(4): 275–291.
Marat E and Sutton D (2021) Technological solutions for complex problems: Emerging electronic surveillance regimes in Eurasian cities. *Europe-Asia Studies* 73(1): 243–267.
MIFTAH (2020) Israeli violations during the Coronavirus pandemic. The Palestinian Initiative for the Promotion of Global Dialogue and Democracy. Available at: http://www.miftah.org/Doc/Specialstudies/2020/Israeli-violations-COVID19En.pdf (accessed 28 April 2023).
Milohova K (2020) 'In a year, "Safe City" cameras recorded more than 1 million violations', Kaktus Media, 27 February. Available at: https://kaktus.media/doc/406870_za_god_kamery_bezopasnogo_goroda_zafiksirovali_bolee_ 1_mln_narysheniy.html (accessed 24 April 2023).
Morozov E and Bria, F (2018) Rethinking the Smart City: Democratizing Urban Technology, New York City: Rosa Luxemburg Stiftung.
Nasritdinov E, Zhumakadyr B and Asanalieva D (2015) Myths and realities of Bishkek's novostroikas. In: Laruelle, M and Engvall, J (eds.) Kyrgyzstan beyond "Democracy Island" and "Failing State": Social and Political Changes in a Post-Soviet Society, Lanham: Rowman & Littlefield, 143-164.
Nolte A and Yacobi H (2015) Politics, infrastructure and representation: The case of Jerusalem's Light Rail. *Cities* 43: 28-36.
Nolte A (2023) Ordering Movement and Mobilizing Security: On the Production of 'Critical Infrastructure.' In: Hein-Kircher, H and Distler, W (eds.) The Mobility-Security Nexus and the Making of Order: An Interdisciplinary and Historicizing Intervention. London: Routledge, 45-68.
Public Association 'Civic Union' (2018) Public Safety in the Sverdlovskii district: Analysis, priorities, preventive measures. Available at: https://reforma.kg/media/post/postpdf/2018-05 -23-2122210883.pdf (accessed 24 April 2023).
Public Association 'Civic Union' (2019) Public safety in Leninskii, Pervomaiskii and Oktiabrskii districts of Bishkek: Stakeholder perceptions, statistics, recommendations. United Office for Drugs and Crime, Available at: https://www.unodc.org/documents/centralasia/2019/2._Public_ Safety.pdf (accessed 24 April 2023).

Robinson J (2023) *Comparative Urbanism: Tactics for Global Urban Studies*. Hoboken, NJ: Wiley & Sons.
Rodgers D and O'Neill B (2012) Infrastructural violence: Introduction to the special issue. *Ethnography* 13(4): 401–412.
Sadowski J and Bendor R (2019) Selling smartness: Corporate narratives and the smart city as a sociotechnical imaginary. *Science, Technology, & Human Values* 44(3): 540–563.
Sanghera B and Satybaldieva E (2021) *Rentier Capitalism and Its Discontents*. Cham: Springer.
Shalhoub-Kevorkian N (2015) *Security Theology, Surveillance and the Politics of Fear*. Cambridge: Cambridge University Press.
Simone A (2021) Ritornello: 'People as infrastructure'. *Urban Geography* 42(9): 1341-1348.
The Care Collective (eds) (2020) *The Care Manifesto: The Politics of Interdependence*. New York: Verso.
Tokoeva A (2018) What is a "Smart City" and how are the authorities implementing it in Kyrgyzstan?. Kloop, 7 May. Available at: https://kloop.kg/blog/2018/05/07/chto-takoe-umnyj-gorod-i-kak-vlasti-vnedryayut-ego-v-kyr gyzstane/ (accessed 23 April 2024).
Tulumello S (2020) Agonistic security: Transcending (de/re)constructive divides in critical security studies. *Security Dialogue* 52(4): 325–342.
Tzidkiyahu E (2022) Understanding political violence in Jerusalem. Bulletin de l'Observatoire international du religieux, N°38, July 2022, Available at: https://obsreligion.cnrs.fr/bulletin/understanding-political-violence-in-jerusalem/ (accessed 23 April 2024).
United Nations Populations Fund (UNFPA) (2020) Evaluation of GPI Project "Addressing Social Disparity and Gender Inequality to Prevent Conflicts in New Settlements in Bishkek". Available at: https://mptf.undp.org/project/00108093 (accessed 23 April 2024).
United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) (n.d.) Demolition Watch. Available at: https://www.unrwa.org/demolition-watch (accessed 23 April 2024).
Urban Studies (2021) Special Issue: Smart cities between worlding and provincializing. 58(3).
Vesti.kg (2019) It will become brighter in Bishkek neighborhoods. 17 April. Available at: https://vesti.kg/obshchestvo/item/60376-v-zhilmassivakh-bishkeka-stanet-svetlee.html (Accessed: 28 April 2023).
Volinz L (2018) Governance through pluralization: Jerusalem's modular security provision. *Security Dialogue* 49(6): 438–456.
Who Profits Research Center (2016) Private Security Companies and the Israeli Occupation. Available at: https://www.whoprofits.org//writable/uploads/publications/1668628693_c198e9ad5a8d7a69ef3b.pdf (Aaccessed 28 April 2023).
Wibben ATR (2020) Everyday security, feminism, and the continuum of violence. *Journal of Global Security Studies* 5(1): 115–121.
Yusupova D (2018) What we know about the company "Vega", the winner of the "Safe City" tender. Kaktus Media. 5 September. Available at: https://kaktus.media/doc/379292_chto_izvestno_o_koncerne_vega_pobeditele_tendera_bezopasnyy_gorod.html (accessed 28 April 2023).

Interviews and other research cited

Interview 1, Security Practitioner, private security company. Israel, November 28th, 2019.
Interview 2, Security Practitioner, private security company. Israel, December 3rd, 2019.
Interview 3, Community Activist, Bishkek, September 7th, 2021.
Interview 4, Representative of Public Association "Civic Union", Online, October 10th, 2021.
Interview 5, Female Palestinian architect. East Jerusalem, June 21st, 2017.
Interview 6, Female Head of Community Center. East Jerusalem. Zoom, November 8th, 2022.
Interview 7, NGO Staffer, Bishkek, May 24th 2019
Interview 8, UN Staffer, Bishkek, September 10th, 2021.
Interview 9, Pervomaiskii District Administration Staffer, Bishkek, September 9th, 2019.
Community Visit 1, Ak-Bata, September 3rd, 2021.
Community Visit 2, Muras-Ordo, September 7th, 2021.

Community Visit 3, Accompanied tour with three translated interviews (Kyrgyz-Russian) in Ak-Ordo, Ala-Too and Archa-Beshik, September 4th, 2021.
Community Visit 4, Rudbekiia Homeowners Association, September 5th, 2019.

H Failing Better Together? A Stylised Conversation about Fieldwork

Co-author: Johannes Gunesch, Central European University in Budapest.

Gunesch J and Nolte A (2020) Failing Better Together? A Stylised Conversation about Fieldwork. In : Kušić, K and Záhora J (eds) *Fieldwork as Failure: Living and Knowing in the Field of International Relations,* E-International Relations Publishing.

https://www.e-ir.info/2020/03/04/failing-better-together-a-stylised-conversation-about-fieldwork/

Abstract

Fieldwork as Failure is a collection of pieces that unsettle the silence that surrounds fieldwork failure in both methods training and academic publications. While fieldwork has gradually evolved into standard practice in IR research, the question of possible failures in field-based knowledge production remains conspicuously absent from both graduate training and writing in IR. This volume fills that lacuna by engaging with fieldwork as a site of knowledge production and inevitable failure. It develops methodological discussions in IR in two novel ways. First, it engages failure through experience-near and practice-based perspectives, with authors speaking from their experiences. And secondly, it delves into the politics of methods in IR and the discipline more generally to probe ways in which the realities of research condition scholarly claims.

Failure, Naturalised and De-Constructed

Amina: How paradoxical it feels to entertain the notion of failure while we are sitting under the sun, next to a pool in which a plastic crocodile is floating.

Johannes: Yes, paradoxical, but maybe also quite telling.

A: Why?

J: Because for early-career scholars like us, failure might reveal itself precisely in the fleeting luxury we enjoy sitting next to a pool.

A: Haha, true, aspiring yet full of insecurity.

J: So the pool is actually a good place to start a conversation about what we might mean when we speak about failure.

A: And how we might fail better together!

J: Yes, but how do we do that? Where would you start?

A: I have this impulse to de-construct failure. As it seems to be all around us, this could help us question the centrality failure has assumed in academia.

J: Interesting, my first impulse would be to conceptualise failure. This, at least, is what I am trained to do. In political science, we often proceed deductively. First, we name the beast, then we try to tame it. So what is failure, which failure are we talking about, where do we locate it? And then: What do we do about it?

A: Funny that you give so much credit to your disciplinary background. In anthropology, you hang out first and see where it takes you, without having to determine everything beforehand. Is this not a bit of a contradiction?

J: Yes, maybe, but it is actually my ethnographic work that triggers those abstract thoughts.

A: How so?

J: I am currently trying to make sense of my empirical material and question how and if at all I can bring different facets together. In reflecting a bit on the practice of ethnographic work in political science and international relations, I realised a tension that I find intriguing. This tension is particularly pronounced in critical research, I think, especially if critical means to question what is, how it came to be, and could be different (see Sjoberg 2018). One way to illustrate this tension, and look at what it does to ethnographic work, is to probe naturalisation and deconstruction (cf. Webster 1986; van Wingerden 2017). By naturalisation, I mean the act of attesting, describing and thereby determining ‘what is’. It is a necessary and positive requirement of all communicative practices, including research interactions. For example, now we talk

about ‘failure’, what it means to us, and thereby circumscribe its ‘nature’ (good or bad, productive or destructive and so on). Likewise, in fieldwork-practice, we try to make sense of other people’s sense-making and capture phenomena ‘on the ground’, wherever this might be. We therefore inevitably naturalise when we generalise from particular experiences. And this is precisely where de-construction comes into play, which seeks to strip things of their assumed naturalness and to probe contingency, diversity, and emergence. Now, if fieldwork is to be critical, distinct requirements overlap: The ‘fieldwork encounter’ valorises ‘being there’ (Borneman and Hammoudi 2017), while the ‘spirit of enlightenment’ aspires to see beyond and overcome our ‘selfinflicted immaturity’. The problem is that those two requirements are simultaneously mobilised to legitimise research, assume authority, and thereby determine success and failure.

A: Ok, so the tension you describe is productive in that it shapes the practice of ethnographic research?

J: Exactly, and this is why such a seemingly dry methodological matter is actually deeply political (see Marchart 2007). Lest we forget, there is not one final cause, God is dead, reason sometimes wicked, utility not monolithic, capitalist growth endless, and so on. This is de-construction, if you will, which does away with clear-cut criteria for failure, too. Nonetheless, in pursuit of empirical validation, professional recognition or confirmation of expertise, we all partake in the act of foundation. We try to establish authority. Those acts are plural and provisional, but they render certain meanings and social artefacts more efficacious than others: Linking productivity to profitability is particularly conspicuous here. After all, progress is paramount and ‘success needs to be earned’, which generates competition. Thus, critical research simultaneously scrutinises and manifests differences; and any attempt to resolve those differences, for example through disciplinary fiat, animates the ensuing contestation.

A: Hmm, you said it yourself, but this really sounds very abstract. What does it bring to our account of ‘failure’ in fieldwork and critical research?

J: Two things: That ‘failure’ cannot be resolved, if only because it means very different things for different people. And that this needs to be worked through. To give a paradigmatic example drawn from the ‘correspondence’ and ‘consensus’ theories of truth, respectively (Jackson 2010): For a positivist perspective of mind-world dualism, failure depends on whether or not research ‘corresponds’ to the ‘real world’; for a post-positivist perspective of mind-world monism, it depends on resonance with interlocutors. The former is ‘objectively’ determined by the use of statistics for example, the latter contingent on ‘inter-subjective’ understanding. This also means each perspective has different requirements of naturalisation and de-construction. Yet, despite those differences, we are all trained and expected to ‘get it right’, no matter our disciplinary affiliations. This makes ‘failure’ ominous and ‘success’ a persistent expectation.

Failure or Not?

A: But you seem to accept ‘failure’ as a term.

J: You would go further?

A: Yes, I would question why we are giving so much weight to failure, especially in the context of ethnographic fieldwork.

J: Why do you think this is? Why do we approach fieldwork through the lens of failure?

A: I think it is partly because, as young researchers, it has become so much part of our experience, our daily environment, and our thinking. The world we live in – the precarious academic world we move in – produces us as failing subjects. Upon our initiation, we are introduced into

a world in which we already fail. As a consequence, ambitious as we are, we have learned to accept failure as a term, as a concept, as a state of being. It looms in the background; a price we feel we have to pay for doing 'what we love'.

J: This is our metaphoric crocodile.

A: Yes, the crocodile of academia if you want, where failure looms in the background of everything we do: of every application and proposal we write or end up not writing; of every interview we are being invited to or not; of every beginning even – be it a sentence, a paragraph, or an entire chapter. Failure is not being able to pursue, to produce, and to perform.

J: So failure is a necessary component of neoliberal academia?

A: Yes, of course. We are taught to anticipate and manage 'failure'. Ultimately everything is 'trial and error', working to 'fail better next time', as Beckett said. Towards that end, failure and the anxiety to fail have become our companions, so much so that we can only learn to handle our precariousness as 'adeptly as possible' (Lorey 2015). But this inadvertently makes us lonely. To struggle with vulnerability, we focus on ourselves. We tend to apply, write, submit and publish alone to distinguish ourselves. We thus also risk failing alone, which is why we have to work harder, alone. To become more mindful. More aware. Resilient. We turn to 'self-help'. So that failure makes us stronger. And, in the end, failure becomes the premise on which (academic) success is supposedly built.

J: But what does it mean to start something on the premises of failure? Can we reject failure as a term, as a concept? Doesn't failure imply knowing what non-failing would entail? What is in between failing and succeeding? An experience, a conversation?

A: Exactly, and this is what ethnographic fieldwork is all about: experiences, engagement, and exchanges – and, most importantly, the reflection on those experiences. Thus, to me it is a question of how seriously we take ethnography in all its dimensions: as a practice of inquiry into social worlds of which we as researchers are an inherent part; as 'actively situated between powerful systems of meaning' (Clifford 2009, 2) in 'which human ways of life increasingly influence, dominate, parody, translate, and subvert one another' (Ibid., 22); as a process and an open engagement with the simultaneity, multiplicity, and ambiguity of lifeworlds. If we take all those things seriously as we claim to do, why do we relate fieldwork to the boundedness and fixedness of failure?

Failure is Ubiquitous

J: Because failure is annoyingly ubiquitous. In my own research, I am continuously confronted with failure. It is there, we cannot just think it away – even though I would be very sympathetic to this kind of undertaking.

A: Could you give an example?

J: Yes, several. For one, there is failure because human suffering is a reality; inequality, poverty, and violence are real, and they are aggravated by discursive constructions that decide whose voices are heard and whose suffering is recognised. This is a failure of politics and proof of our complicity in it. As such, I constantly fail because I do not want to hide behind some form of moral relativism. In my research, I trace the resonance of the Egyptian uprising in international development cooperation, where I also worked for some years. In particular, I focus on how the basic demands for 'bread, freedom, and social justice' are negotiated, misappropriated and thereby dis-qualified. As all those demands are put forth against the reality of economic marginalisation and political disenfranchisement, the problem is that my research entails a double blind: not only do actors in development cooperation tend to disregard people

'on the street'; in scrutinising what those powerful actors do, I also confirm their prerogatives and the exclusions this generates. Thus, I wonder to what extent I actually contribute to the cause of 'bread, freedom, and social justice' through my research – or whether I am not also undermining it, no matter how critical my undertaking claims to be. Second, not only do I fail to live up to my ideals, but arguably also profit from the ensuing situation, which is very unsettling. As a white, male academic, I got a position at the UNDP without any particular knowledge about Egypt when I first arrived. Then the uprising happened, and I got drawn in until this day. Yes, I learned a lot, about political mobilisation and organisation, the politics of international solidarity, about myself … But if it wasn't for the 'failure' of the Egyptian uprising and the misery it has brought upon so many people, my research would probably be only half as appealing. And now I can 'use' my experiences as a commodity in the academic market, not only to sanction my conclusions, but also as a competitive advantage. After all, I have valuable first-hand experiences with the uprising and development cooperation. I am being cynical here, but I profit from the Egyptian uprising in ways that most Egyptians do not because the entrenched structures of capitalist exploitation work in my favour. Third, there is failure because the confrontation with authoritarianism has wide-ranging repercussions, also in research practices. In and beyond Egypt, insecurity, fear, mistrust, anxiety, and violence are widespread. This affects who you talk to, how, what information people relate… Secrecy and gatekeeping are common, and not only because of malicious intentions. In the most extreme cases, people simply disappear, are put in prison or murdered. This happens to Egyptians by the thousands, but nowadays also to foreigners. Giulio Regeni's tragic death is demonstrative (Nassif 2017; Palazzi/Pusterla 2018). The ensuing outcry over the murder of a foreign researcher inadvertently exposed not only the precarious and perilous politics of knowledge-production, but also its entanglement with the political economy of authoritarianism. That is, the structures of capitalist exploitation are related to hierarchies of signification. They affect whose lives, ambitions and sufferings are recognised or not (cf. Butler 2006). And they circumscribe to which people, experiences and narratives we have access to. This depends on the requirements of ethical research practice, but also racist, sexist, classist divisions. In my case, I had to cancel my fieldwork in Egypt. Instead, I now seek to trace the resonance of the Egyptian uprising beyond Egypt. By focusing on development professionals and fellow researchers, I try to put the critical gaze on those with privileges that many Egyptian activists don't have (anymore). But at what costs? Fourth, I know failure because it underpins every step I take. Here, I fully agree with what you said before. We live in an environment that generates competition, induces precarity, valorises commodification, individualizes responsibility, and thereby raises us as failing subjects. I actually find academia particularly odd: While there is an abundance of critical engagement with neoliberalism, young researchers oftentimes comply with the basic neoliberal requirements: We are ever-mobile and risk social relationships while we are at it, work non-stop for meagre pay and petty benefits, don't unionise, let alone properly mobilise … and blame ourselves if we don't make it after all. In all earnest, I heard people tell one another to 'suck it up', 'toughen up', 'it's part of the game' and so on.

Ok, Let's Rephrase Failure

A: Amen, but I would not call any of those points failure.

J: What would you call it?

A: I would first want to ask: what leads you to think about them in terms of failure?

J: Hm, I think it takes a lot not to internalise the regimen of failure when it is constantly rubbed into your face, to say the least.

A: Yes, but without falling into the trap of 'positive psychology', I think that what you mention above is a very productive awareness of the pitfalls and possible dangers of ethnographic fieldwork; of the delicate and sensitive situations that we engage with as researchers; of the harm we often cause without knowing or through the will to know. But reflecting on all of the above is not failure. It is taking seriously ethnographic practice, political context, and the situatedness of experience and knowledge; it is recognising the importance of solidarity, but also the limits of representation. As I said earlier, I think we miss the complexity of working ethnographically in the field if we approach it in terms of a binary distinction between success and failure, right and wrong, complete and incomplete.

J: So how did you experience that during your own fieldwork on urban infrastructure and its contestation in Jerusalem?

A: I had to learn it the hard way. I started my fieldwork by being scared to fail, but I ended up abandoning the term from my own research vocabulary. Now, I think one cannot fail in ethnographic fieldwork. I came to think of it as an open process from which I take what I am able to observe and reflect on it. I mean, there is so much happening 'out there', all at once. But our ability to see and not see things, and to work through them, is limited by how we learned to see and unsee. To accept the partiality and limitedness of one's own perspective is a big chance and relief – but to some it might appear as failure, I guess.

J: How did this realisation come about?

A: Initially, I had no idea what this fieldwork would look like, where it would lead me, what I expected to take away from it. But when I moved to Jerusalem, I realised that there was no field – and no clear-cut failure or success either. I did not enter a 'field' when I entered Israel. There was no 'beginning' of fieldwork and no 'ending'. All I found was a shaky continuity: a continuity of an experience, of a journey, and of a conversation. Instead of thinking of my research as work in a discrete field, I started thinking of 'spacework'. Not because my experience became something out of space but rather in terms of the spatial continuities, frictions, and struggles I learned about (Tsing 2005). I entered that 'space' way before I had physically entered Jerusalem. The boundedness of my research subject dissolved in front of me once I realised that the very space(s) I wanted to research were the ones that I already moved in, that formed my experience and shaped my perspective.

J: Could you give an example?

A: Entering Israel through Ben Gurion Airport always marks a crucial point in my journey through this space. I entered and always enter as the privileged white academic that I am. With a German passport. And a Muslim name – Amina, the mother of Prophet Mohammed. The 'trustworthy', as it translates. But my name is not trustworthy in the heavily securitised space that I enter. The person that I am is not to be believed. I end up sitting in the immigration area in which subjects get securitised through routinised practices of knowing the 'enemy'. Questions. The name of my grandparents, my parents, my siblings. Waiting. Hours of suspension, every time. In silent company with many others, uneasily sharing a space of uncertainty, of subjectification and in between-ness. Not yet in the country – but already in it enough to be subjected to its rules. In it enough to know that compliance helps. Patience. A smile. Some Hebrew words.

J: I can imagine that this experience also shapes every interaction you have during your 'spacework'.

A: Yes, for example every email I sent out as a request for an interview. Should I change my name? Would my name and my interest in Israeli security practices be too suspicious? Would it change how people approach me? I recall how an Israeli security advisor told me straight

away that he had ‘checked’ up on me before our meeting; how the police commander, responsible for the security of infrastructure in Jerusalem, seemed really alert when I called him to ask whether we could meet; how the actors I tried to follow were all of a sudden following me. Googling me. Reading articles I had published. This made me think a lot about how affected my ‘results’ would be from all the presumptions and considerations that the people I interviewed had already gathered about me. How the knowledge they shared with me would already be filtered and weighed. And how I, as the young female researcher, had to comply with their rules of the game. I remember how I played extra naïve during our conversations, not allowing myself to show any disapproval of their words. I remember ignoring the masculinity displayed while talking about security trainings, drone operations, surveillance, and targeted killings along infrastructure in Jerusalem.

J: What did you take out of these experiences?

A: Many questions and maybe some preliminary answers… So, after all, did I fail? I don’t think so. Rather, I adapted, but in a political manner. I came to reflect on the hegemonic discourse I settled in, on how the spaces I lived and moved in were permeated by fixed articulations, sedimented by daily practices and routines. This relates to what you said before about naturalisation and de-construction. Seen from this perspective, every coffee, every walk to the grocery store and every movement happened in the growing awareness of how hegemony works: how hegemony produces its own subjects, how it impacts the things we find and do not find, things we hear and not hear, things we see and do not see. Is this failure? I doubt it. It helped me to refine my theoretical and conceptual reflections, to deepen my initial flirt with Gramsci, Laclau and Mouffe. I understood the value of hegemony as a concept only against the backdrop of my ethnographic engagement. I learned that ‘hegemony is never complete’ (Crehan 2018, 136) but is always at work through the ‘contradictions between the official narratives of the dominant and the actual experience of subaltern’ (Ibid.). Hegemony, as I sort of knew before but only really came to understand through the engagement with my ethnographic encounters and materials, works through the everydayness, the mundane, and the common sense.

J: Well put, and very relevant for how failure as a token of capitalism becomes hegemonic, too.

A: Yes, but the point is that it took all my ethnographic work to realise just that. I spent six months in Jerusalem, between Israel and Palestine, in order to research Israeli security practices around so-called ‘critical infrastructure’. I was interested in how infrastructure is constructed as critical and what is implied in this construction. How does ‘critical infrastructure’ affect the people who use it? How do the actors around it understand what they do? How are politics done under the premises of security concerns and practices? How is an entire world and a society built on the vague meaning of security? It took me a while to realise that everything I did was a part of what I wanted to research. That the continuity between security practices ‘here’ and ‘there’ connects spaces and disconnects others; that security is not to be found in a bounded field but rather in and through the spaces through which its diverging meanings and practices move; that security circulates; and that it materialises spatially, fragments spaces of solidarity, and uproots feelings of safety and community.

J: So, with regards to fieldwork and failure, what does that mean?

A: Well, what I am saying is that there is no field, not at least in any clearly bounded way. And hence there is no definite failure either. The idea of a bounded space or a fixed temporal sequence works with ideas of a ‘beginning’ and an ‘end’, with clear ideas of who has to reach what, in a specific time and place. Instead, the many things that emerge across and in between the social relations that make up our fieldwork practices matter much more to me. This brings me back to what I said before, that trying to put up with failure makes us lonely. In my time in

Jerusalem and beyond, I have had various encounters with fellow researchers, working on similar subjects and going about their own ethnographic endeavours. However, sharing a research subject only seldomly evoked joy or sympathy in these encounters. Rather the opposite: I realised that the fear of failing is even bigger if there is already someone out there who might have better access, more contacts, more experience, or more publications.

J: Here again, ethnographic fieldwork is charged with anxiety, but different from what you said efore.

A: Yes, this is the very particular anxiety of meeting someone who has been quicker, who has been 'there' before you, who harnessed all the information 'out there' and who might be faster in 'using' the information in order to advance their academic career. Here, the 'field' is given a very specific temporal and spatial delineation that it naturally does not possess, and which is at odds with what I said before about it. The tricky part is this: in theory, we cannot be precarious alone. Being precarious does not exist in itself; it is always relational and 'therefore shared with other precarious lives' (Lorey 2015, 12). But in reality, the complete opposite tends to happen. Instead of acknowledging a shared experience and appreciating that our subjective understanding of things will always lead us to see, reflect and write differently than others, we feel endangered by others. If we were to understand that we cannot fail with what we do and that our research will always be framed through the uniqueness of our own perspective, would this not make us more open to relate to each other? Instead of uniting us then, precariousness separates us. Turns us into anxious individuals. And hence it makes us governable in the sense that we compete with each other about who exploits him/herself most 'productively': for funding, for positions, ideas, publications.

J: What do you make out of this?

A: I think that it obstructs the very openness, sharedness, and resonance that ethnographic fieldwork requires. Anxiety leads to everything that ethnographically-informed research should reject – it encourages gatekeeping instead of cooperation, disclosure instead of open exchange, and silence where there should be flows of words, discussions, phrasing and rephrasing, thinking together and with one another. Thus, the fear of failure makes us fail even harder. Instead of accepting the inter-subjective, the personal and positioned relations that exist between the researcher and their 'research subjects', making every research unique in its own way, researchers compare themselves with each other. Instead of relating to each other, learning from each other, they compete. And this, inevitably, only leads to more failure.

Five Inconclusive Suggestions for Failing Better Together

J: So what do we do?

A: Cheeky, that's what I wanted to ask you!

J: I think you are right to point out that we will inevitably fail as soon as we accept the premises of failure.

A: But I also see how anxiety and fear are mechanisms of producing neoliberal subjectivities.

J: Yes, this is something structural, which might not leave us with a lot of possibilities to personalise those pressures. And what is more: if we were to turn those pressures into something positive, we would put it upon ourselves again to adapt, which is precisely how the whole thing works in the first place.

A: But should this stop us from trying harder, or differently, as long as we can at least? Instead of obsessing about our victimhood and helplessness, I really think we need to move on.

J: Where to?

A: Away from our disciplinary routines and the comfort they provide or seem to promise maybe.

J: Ok, let's think, maybe we can identify some very inconclusive suggestions for failing better together.

A: First of all, we could share more. This could help against the commodification of research, the hierarchical politics of expertise, and the uneasy attempt to position oneself as an expert. We can share stories and experiences – positive and negative ones alike. We can share materials, readings-lists, and annotated bibliographies with colleagues. We can co-generate research with interlocutors – instead of informants that contribute 'data', the people we engage with can partake in the conception of research, its writing, and dissemination. But all this requires that we actually try to engage with one another, in conversations, seminars, and supervisions.

J: Yeah, we tend to forget that the struggle can also be beautiful, when we find some shared meaning, a purpose even or a cause.

A: In any case, value is more than just a product – and the purpose of research is not only to come up with a definite conclusion. If we were to talk not only of successes, failure would then become less menacing. And as an incentive to reflect, learn from and gain a sense of purpose in contrast to what we do not want, failure could even be worth experiencing.

J: Relatedly, we could acknowledge the numerous factors that induce vulnerability, which is very different from selfpity. This could be the second point. Instead of artificially separating emotions from research, values from facts, and mind from world, this could help to expose research as personal. Against the ironclad positivist trinity of objectivism, empiricism, and naturalism, there is much to be explored with regards to what our research does to us and our interlocutors. This is what Elizabeth Dauphinée (2010) suggests when her main protagonist asks: 'What expert am I?' To me, this daunting question should neither prompt self-indulgence nor an automatic vindication if only one exposes their tribulations. It would not only be insufficient, but also counterproductive to consider the question in isolation from the socio-political context. Rather, careful scrutiny of structures of domination and hierarchies of signification is needed because they implicate us all. For example, in the course of the Egyptian uprising, fear has long crossed the Mediterranean (Wahba 2018). Now, in many places, politics works through fear, but this is why it could be an unexpectedly empowering act to attest its pervasiveness (Kanafani and Sawaf 2017).

A: Yes. But there is something that makes me feel uneasy with what you are saying. I think it has to do with the emphasis on responsibility or rather the underlying expectation to assume it. Responsibility for what? Where to start? Am I not overly responsible already? Why me? And what about collective responsibility? After all, 'we' care more for those that are close to us, which renders empathy prone to racism. It seems like responsibility has become a disciplinary force, a perversion of Foucault's 'care for self and others'. In this way, responsibility has debilitating and individualising tendencies.

J: True, but maybe this is not so much a problem of responsibility, but its de-political rendition. And here is our third point, I think. As part of it, we need to more confidently establish and clearly communicate standards by which we judge, assess, and act – in ethnographic research as well as other forms of political practice (Schatzki 2009). This goes against my own cynicism as well as (post-modern) relativism. Standards of positivism and policy-relevance are as straightforward as they are predominant, but commitments to justice could oftentimes be made more explicit. And we should utilise our critical purchase. When we feel we do actually get it right, we should speak out, as clearly as possible, and heed the consequences of our insights.

For too long violence has been sanctioned and normalized while its profiteers become apologists. But I feel that what is happening around us is too important to be left to those that are audacious or ruthless enough to speak the loudest. Thus, for me, to cultivate responsibility means dealing with the politics of expertise and the uses and abuses of authority.

A: I like this commitment for, rather than against something. This might be the fourth point, namely that it is not enough to complain about failure and criticise neoliberalism, but that we need to do something about it. In academia, critique is performed extensively. Yet, for all sorts of reasons, critique has run out of steam, as Bruno Latour (2004) famously put it. The performance of critique not only remains inconsequential, but it also helps maintain the status quo (Boltanski/Chiapello 2007). As a case in point, critical researchers also play along even though they obsess over neoliberalism and its effects. But austerity and authoritarianism affect us all, from CEU, which is forced out of Hungary, to many other institutions. So how can a greater concern with social justice be purposefully integrated into academia? Maybe we really need to do things differently, build different, better partnerships. But how can those that have the means support those that don't?

J: That's tricky, but I think we need to shift the focus in order to figure it out. This could be the fifth point. There is much more to critical research than publish or perish, success and failure. Supervision, collegiality, and care are crucial. Lively exchanges, feedback, and revisions matter way beyond a footnote. So thank you, Katarina and Jakub, as well as all the participants of our workshop, for your comments and suggestions to this conversation! And thank you for being open-access, E-IR. We definitely need more spaces to cherish the many experiences, curiosities and contradictions that lie between success and failure in research.

A: Yes, and we need to maintain this conversation and think together – with or without a plastic crocodile in a pool, within and beyond academia.

References

Boltanski L and Chiapello È (2007) *The New Spirit of Capitalism.* London: Verso.

Borneman J and Hammoudi A (eds.) (2017) *Being There: The Fieldwork Encounter and the Making of Truth.* Berkeley and Los Angeles: University of California Press.

Butler J (2006) *Precarious Life: The Powers of Mourning and Violence: The Power of Mourning and Violence.* London: Verso.

Clifford J (2009) Introduction: Partial Truths. In: Clifford J and Marcus G (Eds.) *Writing Culture: The Poetics and Politics of Ethnography*. Berkeley: University of California Press, 1–26.

Crehan K (2018) Antonio Gramsci: Towards an ethnographic Marxism. *Anuac* 7(2): 133–150.

Dauphinée E (2010) The ethics of autoethnography. *Review of International Studies* 36(3): 799–818.

Jackson P (2010) *The Conduct of Inquiry in International Relations: Philosophy of Science and Its Implications for the Study of World Politics.* Washington: American University Press.

Kanafani S and Sawaf Z (2017) Being, doing and knowing in the field: reflections on ethnographic practice in the Arab region. *Contemporary Levant* 2(1): 3–11.

Latour B (2004) Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern. *Critical Inquiry* 30(2): 225–48.

Lorey I (2015) *State of Insecurity: Government of the Precarious.* London and New York: Verso.

Nassif H (2017) On Punishability. Researching in Egypt after Regeni. *Mada Masr*, February 3. Available at: https://madamasr.com/en/2017/02/03/opinion/u/on-punishability-researching-in-egypt-after-regeni/. (accessed 18 October 2023).

Marchart O (2007) *Post-foundational Political Thought. Political Difference in Nancy, Lefort, Badiou and Laclau.* Edinburgh: Edinburgh University Press.

Palazzi F and Michela P (2018) Remembering against the tide: Giulio Regeni and the transnational horizons of memory. *Open Democracy*, 25 January. Available at: https://www.opendemocracy.net/en/north-africa-westasia/giulio-regeni-murder-transnational-memory-egypt-italy/. (accessed 18 October 2023).

Schatz E (2009) *Political ethnography: What immersion contributes to the study of politics.* Chicago: Chicago University Press.

Sjoberg L (2018) Failure and critique in critical security studies. *Security Dialogue* 50(1): 77–94.

Tsing A (2005) *Friction: An ethnography of global connection.* Princeton: Princeton University Press.

Van Wingerden E (2017) Toward an Affirmative Critique of Abstraction in International Relations Theory. *International Relations*, 12 December. Available at: https://www.e-ir.info/2017/12/12/toward-an-affirmative-critique-ofabstraction-in-international-relations-theory/. (accessed 18 October 2023).

Wahba D (2018) Diaspora stories: Crippling fear and dreams of a better home. *Mada Masr*, 16 August. Available at: https://madamasr.com/en/2018/08/16/opinion/u/diaspora-stories-crippling-fear-and-dreams-of-a-better-home/.

Webster S (1986) Realism and Reification in the Ethnographic Genre. *Critique of Anthropology* 6(1): 39–62.

Appendix

Infrastructures as the Social in Action: An Interview with Ronen Shamir

Co-author: Ezgican Özdemir, Department of Sociology and Social Anthropology, Central European University Budapest, Hungary.

Published in: Middle East - Topics & Arguments, 10 (June 2018), p. 53–58.

DOI: 10.17192/meta.2018.10.7731

In the following interview, Ronen Shamir discusses the theoretical and methodological implications of researching infrastructure against the background of his own work on electrification in Mandatory Palestine. He draws our attention to the (post-)colonial genealogies of infrastructure and their role in shaping not just the common perceptions of a region called “Middle East,” but also constructing this region by means of material and social (dis-)connections. Throughout the interview, Shamir stresses how infrastructural systems shape people’s everyday experiences with their physical surroundings. His emphasis points to the understanding of infrastructure as processes of assembling and disassembling people and everyday objects. We invited Ronen Shamir to this interview in order to put his work into a critical dialogue/ exchange with the articles featured in this issue. As a prominent scholar of colonial infrastructures, we are convinced that his work and insights point to issues that are discussed throughout this issue.

Keywords: Infrastructure; Israel/Palestine; Materiality; Actor-Network; Colonialism

Ronen Shamir teaches at Tel-Aviv University. Some of his early works in the sociology of law and the legal profession looked at the history and politics of Palestine and Israel. Later works focus on governance and regulation, specifically with respect to ‘corporate social responsibility.’ Beginning with the study of ‘Globalisation as a Mobility Regime’ (2005), Shamir has explored the materialities of infrastructures. “Current Flow” (Stanford U. Press, 2013) considers electrification in Palestine and present projects looking at electrical engineers in various colonial settings.

Much of your work directly or indirectly relates to the topic of infrastructure. What fascinates/interests you about this subject? How does infrastructure help us to understand and approach questions of the social and political?

What attracts me most in the study of infrastructures is not so much their “social” and “political” effects but the processes and features involved in their assembly. From a certain point of view every social assemblage is a fantastic achievement, even the construction of a single house is pretty amazing, let alone an airliner with 300 passengers crossing an ocean and bringing you on time to this or that gate at this or that airport. So it’s the complexity and mind blowing coordination involved in creating infrastructures which seems fascinating to me. You walk in the city knowing that underneath the ground lies a whole universe of tunnels, pipes, and cables. If you pay attention, you can see the ironcast covers of hidden entries to this world, and sometimes on a cold night you can see a group of men in yellow jackets hovering over one of these entries. I find it fascinating to encounter the very graphic experience of this underworld. So I guess, coming back to your question, that I consider infrastructures as exciting manifestations of the social, rather than just having social origins and impacts.

What theories or theorists have informed or do still inform most of your reflections on infrastructure? Could you maybe name a few key theories and concepts that you think are helpful to approach the concept of infrastructure?

Well we have been experiencing such a surge in the study of infrastructures over the past several years, coming from so many directions – anthropology, science and technology, planning, urban studies, geography, to name a few – that it is impossible to begin singling out the most important. The fact that anthropologists, for example, have taken such an intense interest in infrastructures lately is telling in and of itself. It speaks of a certain urgency to

make stronger links between anthropology and the materiality and material specificities of everyday life. Take Gaza for example, where there are grave concerns of an impending humanitarian disaster. And when you try to understand what is a humanitarian disaster, how it is "assembled" – so to speak – who are the actors who participate in constituting, announcing, perceiving, and of course experiencing a humanitarian disaster, infrastructures simply flood the screen: bombing electric power stations, destroying the sewage system, cutting the pipelines of fuel, all become acutely and painfully tied to taking a shower, cooking, walking at night. And all of this breeds new infrastructures, new sources of oxygen, in the form of a vast network of underground tunnels, a whole world of diggers, and suppliers, and clandestine communications. So you ask about theories and I instead suggest digging up those tremendously important works of social scientists all over the world that explore urban networks of all types. In one way or another they are all guided by what some would call the 'new materialism'.

One of your books, "Current Flow" (2013), focuses on the electrification of Palestine during British colonial rule. Electricity is becoming one of the key infrastructural systems that is given more and more attention to in sociological and anthropological research. In light of your research findings and analysis, what makes electric grids significant in understanding certain histories and sociopolitical realities in such contentious locations as Palestine? How do electricity infrastructures inform us in theorizing on wider topics like modernity and structures of power?

Current Flow was a kind of an exercise in applying the sociology of infrastructures to a colonial context. Here you had the British Government motivated by obvious political considerations granting an exclusive concession to electrify Palestine to a Jewish entrepreneur backed by Zionist investors and institutions. So it was very tempting to explain away all which followed a simply the result of this blatant politics. My theoretical and of course the empirical challenge was to bracket this fact and to patiently trace the actual construction and expansion of the grid. And the more I looked at the details the less the original politics could explain what was going on. This is not to say that the electrification of Palestine had not been quite an important factor in the growing abyss between Arabs and Jews, but for reasons that had more to do with coincidences, technical matters, community response and so on than with a political design smoothly translated into kilowatts per hour. And I think that both cultural anthropologists and science and technology scholars now share the view that grids have lives of their own, so to speak, creating demand, sparking disputes, reshaping public space, and in general participating in the production of potential inequalities and communal differences. In areas of conflict, or war zones, this is simply less nuanced than in other places. As we see in Gaza, cutting electricity can become a weapon. But all in all I think that the logic of analysis, treating electric grids at close range, should be similar everywhere.

Your book is methodologically informed by an approach to infrastructure as an assembly or Actor Network. Critics of ANT find this approach less helpful because it stresses "emergence" and "process" over structure and power. What do you think of this critique? And what approach is, according to you, the most fitting to make sense of infrastructure?

There is nothing in infrastructures that makes it particularly fitting for being analyzed by ANT. It is a common mistake to think that because an infrastructure like electricity has a shape of a network, ANT fits it well. A good material account has nothing inherent to do with networks. So if ANT is applied, it is because electric grids are more than poles and wires and power stations connected to each other. It is because it may be valuable, depending on what you

want to understand, to trace the heterogeneity of electric systems and the way grids and other components of electrical systems attract, divide, or shape the practices or desires or possibilities of other non-electric entities like consumers. As to power and structure, this is even more confusing. Power is a product of certain figurations rather than a driving force or a stock waiting to be deployed. I know this all sounds terribly Latourian, and I am not particularly keen to be his spokesperson here, but I think he gets it absolutely right on this point, not unlike Foucault before him and not very far in methodological terms as well. And structure signifies a certain pattern of consistency which of necessity is an evolving process, or recursive and in case not immutable. Anyway, the point here is that infrastructures are no more a matter of assembly than, say, subjectivity. So there is no special relationship between ANT and the sociology and anthropology of infrastructures.

Our META issue deals with infrastructure in the Middle East and North Africa. Even though your work specifically focuses on Palestine, many of the historical and political processes, like colonialism that shaped Palestine today, are also being tackled in other contexts in the MENA region. How does studying infrastructure in Mandatory Palestine help us to understand and research infrastructures in other parts of the region today? What can we learn by studying relations and processes in the Middle East and between this region and others? Does infrastructure play a role in that?

I take this question as an opportunity to say something about two quite different directions of inquiry. Thinking about the middle-east – and we always have to remember that this designation is fundamentally the British Empire's geopolitical view of the globe – I think there is still a wide open space for studying the infrastructures left behind by the Ottoman Empire, and then move on to look at how the British reshaped the middle-east also through infrastructural works, for example the oil pipelines from Iraq to Palestine. I mainly think here about railways, like the Hijaz, that is yet an untold story from the perspective of the sociology of infrastructures and may yield fascinating insights. But on an entirely different level, I also want to point out that one future direction of inquiry concerns lesser focus on largescale infrastructural systems and more attention to 'small' ones. For instance how urban environments are created by, or hampered by, those old and new and forever changing networks of public benches, or drinking fountains, and public toilets, and phone booths and mail boxes, or informal taxis, etc. etc. There begin to be very interesting works in this direction, and specifically in relation to the so-called Global South, and of course it may tell us a lot about the middle-east and North Africa's trajectory of cities as well.

Many scholars that work on infrastructures, including yourself, might agree to the notion that infrastructural systems are rendered visible when they fail or at a moment of dysfunction. However, in contexts like the Middle East and North Africa region that are now heavily militarized, securitized and urbanized, infrastructural networks are more and more becoming visible and noticeable, even becoming the target or means of struggle and resistance against hegemonic powers. How do you account for this hyper-visibility of socio-technical networks that are initially theorized as 'embedded' and 'invisible' (Star) (?)

This is a very good question, you know, which goes beyond infrastructures. This matter of invisibility is true in general in so many contexts. We often only notice the complexity and fragility of things when they break down. This even applies to our own body, a feeling we are all familiar with once we stretch a muscle, let alone a more serious breakdown of health. It is only then that we often realize how easy we take for granted those things around us as long as they function as we expect them to. So again I'm not sure infrastructures are unique in this

sense. And you are right. Not only when they break down or go missing, but also when waterways, or electricity, or roads become weapons in a conflict, or matters of contest and dispute, is when they become more visible. So it seems that theorizing infrastructures as hidden or invisible does not always apply and it may be better to frame it as an open empirical question rather than as a given premise. I think this is what Stephen Graham tries to do in the edited volume on 'disrupted cities', covering a spectrum from bombing Iraqi infrastructures to collapses by negligence, incompetence or earthquakes.

This issue features three articles that are dealing with infrastructure in Israel and/or Palestine. Why, would you say, does this area assume such a prominent position in the research on infrastructure? How does the lens of infrastructure help us to understand processes of domination and resistance?

I haven't read the papers, but I wouldn't hurry to assume the over-representation or special prominence of Palestine. But thinking of Palestine with the lens of the sociology and anthropology of infrastructure may indeed make you dizzy, as so many historical and contemporary issues immediately appear and are still relatively understudied. We can talk about water resources, past and present, electric grids and where they reach or don't reach and who controls them, the elaborate system of roads, any by-pass roads, and checkpoints and walls creating what Eyal Weizman called the politics of verticality. So a lot in Palestine and Israel is about the politics of infrastructure in a most straightforward way, for example the division of space and its material and symbolic implications, as Amina Nolte shows in her work on Jerusalem's light rail.

Vitality of infrastructures is undoubtedly what drives us social scientists to investigate the intricacies of the role of technological systems in our social lives. C. Wright Mills says in "The Sociological Imagination" that figuring out how people's personal troubles and societies' public issues intersect is the moral task of social science. In a world in which infrastructure speaks directly to individuals' troubles and collective problems, how is social science work going to contribute to social change in terms of social justice, right to resources, equality and freedom of mobility? Can infrastructure be a promise for change?

I think part of the answer is already there in your question. It is quite obvious that works on infrastructures that look at issues of access, or denial of access, and variance in connectivity and so on are tremendously important for understanding the politics behind, and the generation or reproduction of inequality, and as such can also point the way towards collective mobilization and social activism. I think for example about the work of Leo Coleman about electric meters as kind of totems generating solidarities and social action. But I must say that I am always a bit hesitant to assign social science with moral tasks because such projects are never far from social engineering. I prefer to think that moral sensitivities should guide us to explore certain issues and places and that these studies may shed further light on social worlds without harnessing our work to this or that cause. I am not talking about political neutrality, rather about some modesty, I guess, in thinking we can and should change the world. There is enough to do and explore as it is. Infrastructures have been for too long treated only as the stage, or background, or context for social action rather than as the social in action.

The Show Must Go On? - Kommende Katastrophen und die Regierung durch Resilienz

[Review on: Folkers, Andreas: Das Sicherheitsdispositiv der Resilienz: Katastrophische Risiken und die Biopolitik vitaler Systeme. Frankfurt/New York: Campus Verlag, 2017]

Published in: KULT_online 57 (2019).
URL: https://doi.org/10.22029/ko.2019.243.

Abstract

In Das Sicherheitsdispositiv der Resilienz: Katastrophische Risiken und die Biopolitik vitaler Systeme untersucht Andreas Folkers drei Felder zeitgenössischer Sicherheitspraktiken: den deutschen Katastrophenschutz seit dem 11. September 2001, den Schutz vitaler Systeme und kritischer Infrastrukturen sowie das betriebliche Kontinuitätsmanagement. Dabei analysiert Folkers inwieweit Resilienz als Technologie des Regierens und als normatives Leitbild für historische und zeitgenössische Sicherheitsbestrebungen relevant geworden ist. Mittels einer Exposition des von ihm beobachteten Sicherheitsdispositivs der Resilienz leistet Folkers eine gelungene Diagnose der Gegenwartsgesellschaft, die weit über den Kontext Deutschland hinausweist und seine Analyse somit anschlussfähig für internationale Debatten im Feld der Kritischen Sicherheitsforschung macht.

Folkers, Andreas: Das Sicherheitsdispositiv der Resilienz: Katastrophische Risiken und die Biopolitik vitaler Systeme. Frankfurt/New York: Campus Verlag, 2017. 513 Seiten, 39,95 EUR. ISBN: 9783593508795.

Inmitten einer Vielzahl an „humanitärer, ökologischer, sozialer und ökonomischer Krisen“ (S.15), ist das Konzept der Resilienz zu einem Schlüsselbegriff des 21.Jahrhunderts geworden. Denn Resilienz, so suggerieren etwa Ökonom_innen, Psycholog_innen, Pädagog_innen und Politiker_innen, ist der nötige Prozess der Anpassung von Subjekten und Systemen an das vermeintlich Unabwendbare. Was nicht vermieden werden kann, so eine Kernidee der Resilienz, soll zumindest in den möglichen Auswirkungen antizipiert und in den Strategien der Anpassung optimiert und stabilisiert werden.

Ausgangspunkt von Andreas Folkers Buch Das Sicherheitsdispositiv der Resilienz ist die Beobachtung, dass „sich die Rationalitäten und Maßnahmen ‚zur Vorbereitung auf die Katastrophe‘ zu einem neuen Sicherheitsdispositiv, dem Sicherheitsdispositiv der Resilienz, versammelt haben“ (S.20). Resilienz wird dabei als eine historisch gewachsene und gegenwärtige Ausprägung von Si-cherheit analysiert Sie ist, so die zentrale Erkenntnis des Buches, „zum normativen Leitbild von zeitgenössischen Sicherheitsbestrebungen geworden“ (S.180).

Das erste Kapitel beginnt mit einer ausführlichen soziologischen Situierung der Arbeit und der Begründung für das, als „Analytik der Sicherheit“ (S.23) angelegte, Vorgehen. Hier gelingt nicht nur eine spannende Hinführung zu den drei umfangreichen empirischen Kapiteln, sondern auch eine stimmig begründete Abkehr von der in Deutschland prominent betriebenen Risikosoziologie: Demnach sind Sicherheitsbestrebungen nicht einzig als eine Antwort auf bestimmte, schlicht zu regierende Risiken zu analysieren, wie Folkers mit Rückgriff auf Debatten aus den Governmentality Studies, der kritischen Sicherheitsforschung und theoretischen Anleihen aus Systemtheorie, Science and Technology Studies (STS) und internationalen Debatten zur Biopolitik erläutert. Vielmehr rücken Risiken als historisch kontingente Produkte von Technologien der Sicherheit in den Blick. So gelingt es Folkers, Foucault‘sche Analytik mit den Einblicken von STS und Actor-Network-Theorie in ein aufschlussreiches, und bisher ebenso seltenes Gespräch zu bringen (S.44).

Das zweite Kapitel untersucht die Neuausrichtung des Katastrophenschutzes in Deutschland als Ergebnis veränderter Problematisierungen durch sicherheitspolitische Überlegungen. Dabei wird deutlich, inwieweit sich die Sicherheitsbedenken- und Bestrebungen nach 9/11 an den Normen des Resilienzgedankens ausgerichtet haben. Dass Resilienz auch in Bezug auf „kritische Infrastrukturen“ (S.165) und der Regierung der Katastrophe im Falle von betrieblichem Kontinuitätsmanagement zur Norm von Sicherheitsbestrebungen geworden ist, führt Folkers dann im dritten und vierten Kapitel pointiert und kenntnisreich aus. Im Mittelpunkt der skizzierten Gefährdungen stehen dabei nicht Subjekte oder die Bevölkerung selbst, sondern eben

„vitale Systeme“ (S.24) und „kritische Infrastrukturen“ (S.24). Diesen wird in einem doppelten Sinne Kritikalität zugeschrieben: Sie sind „einerseits von entscheidender Bedeutung für das Funktionieren der Gesellschaft“, „andererseits aufgrund ihrer hohen Komplexität aber auch krisenanfällig und damit in einem potentiell kritischen Zustand“ (S.162).

Aus dieser Gleichzeitigkeit ergibt sich die Wirkmacht des Resilienz-Konzeptes: Systemische Risiken, die nicht einfach ausgeschaltet werden können, weil die Bevölkerung auf das Funktionieren der Systeme angewiesen ist, müssen ihr Gefährdungspotential durch Sicherheitstechnologien reduzieren. Das bedeutet, auf mögliche Gefahren so vorbereitet sein zu müssen, dass kleine Störungen sich nicht in katastrophale Kettenreaktionen verwandeln können. Laut Folkers kommt der Resilienz in Bezug auf systemische Gefährdungen dabei ein „Doppelstatus“ zu: Resilienz wird „eine Technologie zur Kontrolle systemischer Risiken und zur Regierung der Katastrophe“, gleichzeitig aber auch zum er-klärten „Telos“, das Resilienz von Systemen zum normativen Leitbild von Sicherheitspraktiken setzt. So verstanden steht Sicherheit nicht mehr für die unbedingte Abwehr, Verhinderung und Ausschaltung aller potentiellen Gefahren. Vielmehr geht es darum, potentiell gefährdete Objekte, Prozesse und Zirkulationen vorab so zu konfigurieren, dass sie erfolgreich auf Krisen und Störungen reagieren und sich an diese neuen Gefahren anpassen können (S.180). Sicherheit kann diesem Verständnis nach nicht mehr gewährleistet, mögliche Unsicherheiten aber antizipiert und gemanagt werden. Von der Warte der Resilienz betrachtet, bedeutet Sicherheit daher ein kontinuierliches ‚the show must go on‘.

Folkers versammelt in seiner Dispositivanalyse zahlreiche historische und zeitgenössische Beispiele, die die Wirkmacht des Resilienzkonzeptes verdeutlichen. Anstatt dabei den klassischen, dichotomen soziologischen Denkformen (mikro und makro, Natur und Kultur, Mensch und Umwelt, System und Bevölkerung) zu folgen, nimmt der Autor die Verschränkungen, Vernetzungen, Wechselwirkungen und die damit einhergehenden Gefährdungen dieser vermeintlichen Gegensätze in den Blick (S.352). Sein Anspruch, die Verschiebung von Sicherheitsbestrebungen, weg vom „Regieren durch Subjektivierung“ (S.42) hin zu einer Steuerung vitaler Systeme und kritischer Infrastrukturen offenzulegen und zu analysieren, geht durchaus auf.

Offen aber bleibt die Frage, welche Rolle dem Subjekt zukommt oder welche Formen der Subjektivierung das Sicherheitsdispositiv der Resilienz hervorbringt. Dabei ließe sich in gerade durch die Anlage der Arbeit als Dispositivanalyse der vermeintliche Gegensatz von Subjekt und System in Frage stellen. Spannend zu diskutieren wäre, inwiefern Infrastrukturen der Sicherheit und Technologien der Resilienz – aller Ausrichtung auf vitale Systeme und kritische Infrastrukturen zum Trotz – dennoch auf spezifisch zugerichtete Subjekte angewiesen sind oder wie sie diese in zahlreichen Wechselwirkungen als Effekt hervorbringen.

In seinem Fazit weist Folkers auch auf Formen der kritischen Infragestellung aktueller Sicherheitspraktiken hin. Er diskutiert, wie sich durch eine Kritik der Sicherheit eine Zukunft erschließen ließe, die nicht in der Ablehnung, sondern in der Umdeutung von Sicherheit fußen könnte. Folkers skizziert eine Kritik, die Sicherheit nicht gegen Freiheit und Emanzipationsbestrebungen ausspielt, sondern affirmativ als „sicherheitspolitische Gegenkalkulation“ (S.467) zu aktuellen Praktiken von Sicherheit setzt.

Auch wenn die spannende Diskussion rund um mögliche Formen der Kritik von Sicherheit vielleicht in Relation zum Gesamtvolumen von ca. 500 Seiten etwas zu kurz kommen mag, gelingen Andreas Folkers in Das Sicherheitsdispositiv der Resilienz insgesamt umfassende und bisweilen sogar packende Einblicke in die komplexen sicherheitspolitischen Konfigurationen der Gegenwart.

Den Staat wieder spüren – Heimat und Infrastruktur

Co-author: Carola Westermeier

Published in: theorieblog.de, 23rd October 2018. *URL: https://www.theorieblog.de/index.php/2018/10/den-staat-wieder-spueren-heimat-und-infra-struktur/.*

— Amina Nolte und Carola Westermeier richten zum Start der letzten Woche unserer Heimat!?-Reihe den Blick auf die Bedeutung von Infrastruktur und damit auf die materielle Dimension von Heimat und Heimatpolitik. —

„Zusammenhalt“ und „gleichwertige Lebensverhältnisse“ sind die erklärten Ziele des Bundesministeriums des Innern, für Bau und – seit dieser Legislaturperiode – Heimat. Viele öffentliche Beiträge, die sich mit dem Heimatbegriff beschäftigen, haben darauf aufmerksam gemacht, dass Diskurse um Zugehörigkeit auch immer Ausgrenzungsprozesse erzeugen und dass ein Gefühl von Heimat mitunter Ergebnis eines langen Prozesses sein kann. Was in diesen Diskussionen wenig Beachtung gefunden hat, sind die sich konkretisierenden politischen Maßnahmen, die keineswegs nur auf Identitätsdiskurse und Leitkultur abzielen, sondern eine durchaus handfeste materielle Dimension implizieren. Ganz konkret geht es dem Bundesministerium in Bezug auf Heimat weniger um Emotionen und Identitäten als „um Infrastruktur, um Kultur, um Daseinsvorsorge. Da müssen sehr handfeste strukturpolitische Entscheidungen getroffen werden,” wie der Abteilungsleiter des neuen Heimatministeriums kürzlich im STERN erklärte. Auf diese Weise bekommt der eher abstrakte und umstrittene Heimatbegriff mittels des scheinbar unproblematischen Begriffs der Infrastruktur eine konsensfähige materielle Grundlage. Denn angesichts maroder Straßen, schlechter Netzversorgung und chronisch überlasteter Bahntrassen wird der Aufruf zum Infrastrukturausbau gemeinhin sehr begrüßt. Der Ausbau und Betrieb von Infrastrukturen als zentralen Versorgungssystemen, die Gesellschaft erst ermöglichen, steht jedoch in einem engen Zusammenhang mit dem Ausbau der Sicherung eben dieser Systeme. Infrastrukturpolitik, hier verstanden als techno- und biopolitische Regierung der Gesellschaft, wird somit zum Gegenstand sicherheitspolitischer Bedenken und Maßnahmen, durch die staatliche Akteure in Kooperation mit privaten Anbietern ihren Zugriff auf die Bevölkerung unhinterfragt ausbauen können. Der Zusammenhang von Heimat, (privatisierter) Infrastruktur und Sicherheit soll deshalb in diesem Beitrag einer kritischen Analyse unterzogen werden.

Mit Bezug auf Infrastruktur als Mittel und Weg der „Heimatpflege” nutzt das Ministerium den bekannten Begriff der Daseinsvorsorge. Geprägt von Ernst Forsthoff im Jahr 1938, bezeichnet Daseinsvorsorge die staatliche Bereitstellung aller unmittelbar zum Lebenserhalt notwendigen Leistungen und Güter. Er umfasst die Verbindung des Staates zu seinen Bürgerinnen und Bürgern in Form von deren Durchdringung mit daseinserhaltenden Maßnahmen und Strukturen – und damit gleichzeitig auch die Notwendigkeit zum permanenten Schutz eben jener Versorgungssysteme, um deren reibungsloses Funktionieren permanent zu gewährleisten. Infrastrukturpolitik, so zeigt sich im Zusammenhang zur proklamierten Heimatpolitik sehr deutlich, ist Techno- und Biopolitik zugleich. Denn der Zugriff des Staates auf das Leben (und Sterben) seiner Bürger*innen und der sie versorgenden Systeme steht dabei im ständigen Wechselverhältnis von Freiheits- und Sicherheitsdynamiken.

Infrastrukturen als Lebensadern moderner Gesellschaften sollen schaffen, was angesichts zunehmender Globalisierung und unter dem Primat des „mehr Markt, weniger Staat“ auf der Strecke geblieben ist: gleichwertige Lebensverhältnisse und das Gefühl von staatlicher Vor- und Fürsorge. Allerdings ist die Versorgung entlegener Gegenden für viele private Versorger schlichthin zu aufwendig und wenig profitabel. Das hat Innenminister Seehofer als Problem benannt: „Heimat geht verloren, wenn der Ortskern verfällt, die Nachbarhäuser leer stehen, wenn Infrastruktur verlorengeht, wenn in den Städten Wohnungen nicht mehr bezahlbar sind oder in strukturschwächeren Räumen geliebte Menschen wegziehen, weil sie nur an anderen Orten bessere Lebenschancen sehen.”

Heimat als Zusammenhalt, Zusammengehörigkeit, Zugehörigkeit – das sollen die Menschen in Deutschland deutlicher erfahren und zwar vor allem mittels handfester Strukturmaßnahmen.

Investitionen in neue Infrastruktur, der Ausbau existierender Infrastruktur und eine bessere Anbindung von ruralen Gebieten an infrastrukturelle Versorgungsnetze sollen die Menschen den Staat wieder spüren lassen. Infrastrukturelle Maßnahmen dienen jedoch stets den dem doppelten Zweck von Versorgung und Kontrolle. Denn der Ausbau und Betrieb von Infra-Strukturen erweist sich zugleich auch als Regierungstechnik. Staatliche Institutionen nutzen sie, um Handeln durchzusetzen, um Menschen sehen, zählen, ordnen und steuern zu können. Bereits Michael Mann hat die „infrastrukturelle Macht" des Staates als politisches Ordnungsprinzip in Demokratien hervorgehoben. Die infrastrukturelle Durchdringung der Gesellschaft mit staatlichen Leistungen umfasst dabei eben nicht nur die einseitige Bereitstellung von Ressourcen (Wasser, Strom, Internet, Straßen, öffentliche Verkehrsmittel etc.), sondern zugleich auch das Erfassen, Ordnen und Intervenieren in die Abläufe des gesellschaftlichen Zusammenlebens selbst.

Dieser doppelte Nutzen von Infrastruktur lässt erahnen, warum das Heimatministerium als Teil des Innenministeriums ein besonderes Interesse am Ausbau von Infrastrukturen haben könnte. Dem Zugriff des Staates auf und durch Infrastrukturen liegt nämlich ein Ordnungsprinzip zugrunde. Infrastrukturen ermöglichen gesellschaftliche Abläufe und Routinen, die Zirkulation von Personen, Gütern und Daten sowie die Aufrechterhaltung hochkomplexer interdependenter Systeme. Sie werden Teil sicherheitspolitischer Erwägungen, indem sie den Zugriff des Staates eben nicht nur ermöglichen, sondern ihn durch ihre ‚Kritikalität' und potentielle Vulnerabilität geradezu erfordern. Über die Sicherung dieser Grundstrukturen moderner Gesellschaft beansprucht das Heimatministerium in einem klassischen securitizing move somit Zuständigkeit für einen Politikbereich, dem es eigentlich nicht an Zuständigkeiten mangelt. Infrastrukturpolitik ist bereits Angelegenheit verschiedenster Stellen, u.a. des Bundesministeriums für Verkehr und digitale Infrastruktur sowie der Bundesländer und Kommunen. Heimatpolitik entpuppt sich somit bei genauerer Betrachtung als Sicherheitspolitik.

Vor dem Hintergrund staatlicher Sicherheitsbemühungen bekommt der derzeit vorangetriebene Ausbau der digitalen Infrastruktur eine weitere Facette, denn hier sind die zentralen Akteure nicht staatliche, sondern privatwirtschaftliche. Bekanntlich ist mit der gewöhnlichen Nutzung des Internets das Produzieren von Daten nahezu unvermeidlich. Dass die Daten dabei nicht von staatlichen Autoritäten, sondern von privaten Firmen gesammelt werden, widerspricht der Logik der Regierungstechnik nicht, sondern ist eher ein Hinweis auf ihren zeitgenössischen Charakter: Insbesondere auf dem Feld der Infrastrukturen bauen Staat und Privatwirtschaft aufeinander auf, ergänzen einander, sind interdependent. In zahlreichen Bereichen, die lange Zeit in öffentlicher Hand lagen, haben private Akteure die einstmals staatlichen Aufgaben übernommen, oder Staatsbetreibe wurden in private Unternehmensformen überführt.

Dass Innenminister Seehofer nun den „vermeintlichen Siegeszug des ökonomischen Liberalismus" kritisiert und dem neoliberalen Denken „ordoliberales Handeln" entgegen zu setzen gedenkt, könnte man als Maßnahme gegen zunehmende ökonomische Ungleichheit verstehen. Als Einsicht, dass Flexibilisierung und Prekarisierung ein handfestes Problem für das konservative Projekt darstellen. Neoliberale Politiken haben die materiellen Werte derer zerstört, die sie unter der Ägide des freien Marktes einführten. Der Erwerb des klassischen konservativen Glücks, des Eigenheims, ist dank rasant gestiegener Immobilienpreise für viele Angehörige der Mittelklasse (insbesondere die Nicht-Erbenden) schlicht undenkbar. Dass der Staat sich auch aus dem Wohnungsbau größtenteils zurückgezogen hat, ist ein weiterer Grund für den eklatanten Mangel an bezahlbarem Wohnraum in Ballungsräumen.

Wenn nun ordoliberales Handeln und ein stärkerer Staat gefordert werden, bedeutet das nicht, dass der Staat seine Aufgaben von privaten Akteuren zurückholt. Vielmehr werden für private Akteure ‚Anreize' geschaffen, um in Infrastrukturen zu investieren, die bisher eher unrentabel

erschienen. So geschieht es derzeit beim vieldiskutierten Breitbandausbau in ländlichen Gebieten. Dieser passiert oftmals in Form von Kooperationen öffentlicher und privater Akteure. Bürger*innen werden – teilweise schriftlich von ihren Bürgermeister*innen – aufgefordert, sich langfristig an private Anbieter zu binden, die im Gegenzug den Glasfaserausbau versprechen. Dies geschieht jedoch nur unter der Bedingung, dass genügend Einwohner eines Ortes solche Absichtserklärungen abgeben. Die Verträge mit diesen Anbietern sind allerdings deutlich kostspieliger als die der marktüblichen DSL-Anbieter. Außenbereiche bleiben dabei oftmals außen vor. Ein wirklich flächendeckender Ausbau ist nicht rentabel für die privaten Anbieter.

Eines dieser Unternehmen ist die „Deutsche Glasfaser“, die den Heimatbegriff in ihrer Werbung vereinnahmt (siehe Fotos): „Für Sie, Ihre Heimat, Ihre Zukunft“ – lautet ein Slogan. Der Vertragsabschluss wird zur Heimatpflege, denn die Einbindung in die digitale Infrastruktur sichert nicht der Staat, sondern die Bürger*innen. Was der Staat seine Bürger*innen hier fühlen lässt? Zusammenhalt muss man sich leisten können.

Literature

7amleh (Haifa) (2020) Facial Recognition Technology & Palestinian Digital Rights. 21 May. Available at: https://7amleh.org/2020/05/21/facial-recognition-technology-and-palestinian-digital-rights (accessed 21 April 2023).

+972 Magazine (2023) Explainer: Israel expands power to strip Palestinians of citizenship and residency. 20 February. Available at: https://www.972mag.com/citizenship-residency-revocation-explainer/ (accessed 5 May 2025).

Abu Goush A (2016) Surviving Jerusalem: Fifty years of neglect & daily suffering just to remain. *Palestine-Israel Journal* 21 (4): 6–11.

Abrahamsen R and Leander A (2016) Introduction. In: Leander A and Abrahamsen R (Eds.) *Routledge Handbook of Private Security.* London: Routledge, 1–8.

Abrahamsen R and Williams MC (2009) Security Beyond the State: Global Security Assemblages in International Politics. *International Political Sociology* 3 (1): 1–17.

Agence Urbaine de Casablanca (AUC) (2008) Schéma Directeur d'Aménagement Urbain du Grand Casablanca (SDAU). Available at: https://www.auc.ma/docs/124112008133350.pdf. (accessed March 2019).

Aharoni S B, Sa'ar A and Lewin A C (2022) Security as care: communitarianism, social reproduction and gender in southern Israel. *Feminist Theory* 23(4): 444–466.

Akbari A (2022) Authoritarian smart city: A research agenda. *Surveillance & Society* 20(4): 441–449.

Akhter M (2015) Infrastructure Nation: State Space, Hegemony, and Hydraulic Regionalism in Pakistan. *Antipode* 47 (4): 849–870.

Akimat Almaty (2022) Almaty city development program 2025 and medium-term outlook to 2030. https://www.gov.kz/memleket/entities/almaty/documents/details/344101?lang=ru (accessed 28 April 2023).

Alam A and Houston D (2020) Rethinking care as alternate infrastructure. *Cities* 100: 102662.

Aldermann DH (2008) Place, Naming and the Interpretation of Cultural Landscapes. In: Graham P & Howard P (Eds.) *The Ashgate Research Companion to Heritage and Identity*. Burlington: Ashgate, 195–213.

AL-HAQ (Ramallah) (2018) Punitive r esidency r evocation: The m ost r ecent t ool of f orcible t ransfer. 17 March. Available at: https://www.alhaq.org/advocacy/6257.html (accessed 21 April 2023).

Altenhain C (2023) Networked security in the colonial present: Mapping infrastructures of digital surveillance and control in São Paulo. *Security Dialogue* 54(1): 21–38.

AL-HAQ (Ramallah) (2020) COVID-19 and the Systematic Neglect of East Jerusalem. 14 July. Available at: https://www.alhaq.org/publications/17118.html (accessed 28 April 2023).

Amarouche M and Bogaert K (2019) Reshaping space and time in Morocco: The agencification of urban government and its effects in the Bouregreg valley (Rabat/ salé). *Middle East - Topic & Arguments* 12: 44–54.

Amicelle A (2011) Towards a 'New' Political Anatomy of Financial Surveillance. *Security Dialogue* 42 (2): 161–178.

Amnesty International (2023) Automated Apartheid. 2 May. Available at: https://www.amnesty.org/en/documents/mde15/6701/2023/en/ (accessed 04 May 2025).

Amrov S (2017) "Homes as infrastructures of intimacy. Available at: http://societyandspace.org/2017/ 10/03/homes-as-infrastructures-of-intimacy. (accesssed March 2018).

Anand N (2015) Leaky states: Water audits, ignorance and the politics of infrastructure. *Public Culture* 27 (2): 305–330.

Anand N, Gupta A and Appel H (eds) (2018) *The promise of infrastructure*. Durham: Duke University Press.

Anderson B (2006) *Imagined Communities: Reflections on the Origin and Spread of Nationalism.* Verso.

Angelo H and Hentschel C (2015) Interactions with Infrastructure as Windows into Social Worlds: A Method for Critical Urban Studies: Introduction. *City*. Epub ahead of print 01 April 2015. DOI: https://doi.org/10.1080/13604813.2015.1015275.

Appel H, Anand N and Gupta A (2015) Introduction: The Infrastructure Toolbox. *Cultural Anthropology*, 24 September. Available at: https://culanth.org/fieldsights/714-introduction-theinfrastructure-toolbox. (accessed 28 March 2018).
Aradau C (2010) Security That Matters: Critical Infrastructure and Objects of Protection. *Security Dialogue* 41 (5): 491–514.
Aradau C (2016) Political grammars of mobility, security and subjectivity. *Mobilities* 11 (4): 564–574.
Aradau C (2010) Critical Infrastructure and Objects of Protection. *Security Dialogue* 41 (5): 491–514.
Association for Civil Rights in Israel (ACRI) (2017) *East Jerusalem. Facts and figures.* Available at: https://www.acri.org.il/en/wp-content/uploads/2017/05/Facts-and-Figures-2017.pdf (accessed March 2018).
Avant D (2005) Private Security Companies. *New Political Economy* 10 (1): 121–131.
Azaryahu M and Kook R (2002) Mapping the Nation: Street Names and Arab-Palestinian Identity: Three Case Studies. *Nations and Nationalism* 8 (2): 195–213.
Balzacq T, Leonard S, and Ruzicka J (2016) Securitization' Revisited: Theory and Cases. *International Relations* 30 (4): 494–531.
Bargach J (2011) *Rabat: From capital to global metropolis. In The evolving Arab city: Tradition, modernity and urban development*. Ed. Elsheshtawy Y. Abingdon, New York: Routledge.
Barghouti O (2009) Derailing Injustice. Palestinian Civil Resistance to the 'Jerusalem JLR'. *Jerusalem Quarterly* 38: 46–75.
Barkat N (2010) The mayor's vision for Jerusalem. Jerusalem Center for Public Affairs. Available at: http://jcpa.org/article/the-mayors-vi sion-for-jerusalem/ (accessed March 2018).
Barney D (2018) Infrastructure. *Krisis – Journal for contemporary philosophy* 2: 79–81.
Barthel PA and Planel (2010) Tanger-med and casa-Marina, prestige projects in Morocco: New capitalist frameworks and local context. *Built Environment* 36 (2): 176–191.
Baumann H (2021) Infrastructural violence in Jerusalem: Abjection, incorporation, and resistance in the "Cyborg City". In: Navaro Y et al. (eds.) Reverberations. Violence across time and space. Philadelphia: University of Pennsylvania Press, 207–232.
Bauman Z, Bigo D, Esteves P, Guild E, Jabri V, Lyon D, and Walker RBJ (2014) After Snowden: Rethinking the Impact of Surveillance. *International Political Sociology* 8 (2): 121–144.
Baumann H (2014) The Heavy Presence of Jerusalem JLR: why Palestinian Protesters Attacked the Tracks. *Open Democracy,* 14 November. Available at: https://www.opendemocracy.net/arab-awakening/hannabaumann/heavy-presence-of-jerusalem-light-rail-why-palestinian-protesters-attac. (accessed 18 October 2023).
Baumann H (2016) Enclaves, borders, and everyday movements: Palestinian marginal mobility in East Jerusalem. *Cities* 59: 173–182.
Baumann H (2018) The violence of infrastructural connectivity: Jerusalem's light rail as a means of normalisation. *Middle East - Topic & Arguments* 10: 30–38.
Baumgarten-Sharon N (2010) Caution: Children Ahead! The Illegal Behavior of the Police toward Minors in Silwan Suspected of Stone Throwing. B'Tselem – The Israeli Information Center for Human Rights in the Occupied Territories. December 2010, Available at: https://www.btselem.org/download/201012_caution_children_ahead_eng.pdf (accessed 04 May 2025).
Beauchamps M, Hoijtink M, Leese M, Magalhaes B, Weinblum S and Wittendorp S (2017) Introduction: Security/Mobility and the politics of movement. In: Leese M and Wittendorp (eds.) *Security/Mobility: Politics of Movement*. Manchester: University Press, 74–89.
Beaugé F (2009) Des trés riches et des trés pauvres. *Le Monde* http://www.lemonde.fr/afrique/art icle/2009/07/15/des-tres-riches-et-des-tres-pauvres_1218998_3212.html. (accessed March 2018).
Beier R (2019) The world-class city comes by tramway: Reframing Casablanca's urban peripheries through public transport. *Urban Studies*. Epub ahead of print 23 July 2019. https://doi.org/10.1177/ 0042098019853475.
Beier R (2019) Worlding cities in the Middle East and North Africa – arguments for a conceptual turn. *Middle East - Topics & Arguments* 12: 28–34.

Beier R and Nolte A (2020) Global aspirations and local (dis-)connections: A critical comparative perspective on tramway projects in Casablanca and Jerusalem. *Political Geography*. Epub ahead of print 11 December 2019. DOI: https://doi.org/10.1016/j.polgeo.2019.102123.
Berger M (2017) Inside East Jerusalem's bus system for Palestinians. Available at: https://www.citylab. com/transportation/2017/08/the-long-road-to-high-speed-rail-in-israel/535860/ (accessed July 2019).
Berry-Chikhaoui I (2010) Major urban projects and the people affected: The case of Casablanca's avenue royale. *Built Environment* 36(2): 216–229.
Betz, David J, and Stevens T (2013) Analogical Reasoning and Cyber Security. *Security Dialogue* 44 (2): 147–164.
Bijker WE and Law J (2000) *Shaping Technology/Building Society: Studies in Sociotechnical Change*. Massachusetts Institute of Technology.
Bogaert K (2018) *Globalized authoritarianism: Megaprojects, slums, and class relations in urban Morocco.* Minneapolis: University of Minnesota Press.
Booth W and Eglash R (2014) Jerusalem Train Line Destined to Connect Jews and Arabs has Widened Bitter Divide. *The Washington Post*, 3 November. Available at: http://www.washingtonpost.com/world/middle_east/jerusalem-train-line-destined-toconnect-jews-and-arabs-has-widened-bitter-divide/2014/11/01/331d11ea-5f73–11e4-9f3a-7e28799e0549_story.html. (accessed 17 October 2023).
Bowman GW (2012) Refiguring the Anthropology of the Middle East and North Africa. *The SAGE Handbook of Social Anthropology* (1) 2012: 678–710.
Broecker H and Westermeier C (2019) Securitization as Hegemony in Langenohl A und Kreide R (eds.) *Conceptualizing Power in Dynamics of Securitization: Beyond State and International System.* Baden Baden: Nomos Verlag.
Burgess, Peter J (2007) Social Values and Material Threat: The European Programme for Critical Infrastructure Protection. *International Journal of Critical Infrastructures* 3 (3/4): 471–487.
Burns R, Fast V, Levenda A and Miller B (2021) Smart cities: Between worlding and provincialising. *Urban Studies* 58(3): 461-470.
Buzan B and Wæver O (2003) *Regions and Powers. The Structure of International Security.* Cambridge: Cambridge University Press.
Buzan B, Waever O and de Wilde J (1998) Security Analysis: Conceptual Apparatus. In: Buzan B, Weaver O and de Wilde J (eds.) *Security. A New Framework for Analysis.* Colorado: Lynne Rienner Pub, 21–48.
Buzan B, Wæver O, and de Wilde J (1998) *Security: A New Framework for Analysis*. Boulder: Lynne Rienner.
Callon M (1984) Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay. *The Sociological Review* 32 (1): 196–233.
Carrithers M et al. (2010) Ontology Is Just Another Word for Culture: Motion Tabled at the 2008 Meeting of the Group for Debates in Anthropological Theory, University of Manchester. *Critique of Anthropology*. Epub ahead of print 28 May 2010. Doi: 10.1177/0308275X09364070.
Casa Tramway (2013) Petite histoire du tramway. Available at: http://www.casatramway.ma/fr/inf ormations-pratiques/etudiants Accessed March 2018. (accessed 19 October 2023).
Chambre des Représentants (2013) Texte intégrale du discours de SM le Roi Mohammed VI á l'ouverture de la premiére session de la troisiéme année législative de la 9éme législature. Available at: http://www.chambredesrepresentants.ma/fr/discours-royaux/texte-integrale-du-discours-de-sm-le-roi-mohammed-vi-louverture-de-la-premiere. (accessed March 2018).
Cheshin AS, Hutman B and Melamed A (1999) Separate and Unequal: The Inside Story of Israeli Rule in East Jerusalem. Harvard: Harvard University Press.
Chiodelli F (2012) The Jerusalem Master Plan. Planning into Conflict. *Jerusalem Quarterly* 51: 5–20.

Chiodelli F (2013) Re-shaping Jerusalem: The transformation of Jerusalem's metropolitan area by the Israeli barrier. *Cities 31*: 417–424.
Charmaine C, Danyluk M, Cowen D et al. (2018) Introduction: Turbulent Circulation: Building a Critical Engagement with Logistics.*Society and Space* 36 (4): 617–629.
CITYPASS. Tickets and pricing (n.y.) Available at: https://citypass.co.il/en/tickets-and-prices. (accessed September 2018).
Civic Coalition for Defending Palestinian's Rights in Jerusalem (2009) The Jerusalem JLR Train: Consequences and Effects. Available at: http://civiccoalition-jerusalem.org/system/files/documents/jerusalem_light_rail.pdf (accessed 27 November 2014).
Coaffee J and van Ham P (2008) "Security branding": The role of security in marketing the city, region or state. *Place Branding and Public Diplomacy* 4(3): 191–195.
Collier, Stephen J and Lakoff A (2010) Infrastructure and Event. The Political Technology of Preparedness. In: Braun B and Whatmore S (Eds.) *Political matter. Technoscience, democracy, and public life*. Minneapolis: University of Minnesota Press.
Creative Class Group (2015) Building a creative society in Jerusalem. Available at: https://www.creat iveclass.com/_wp/wp-content/uploads/2016/06/CCG-Jerusalem-FINAL-REPORT. pdf. (accessed March 2018).
Cresswell T (2006) *On the move. Mobility in the modern Western world*. New York: Routledge.
Cresswell T (2019) Towards a Politics of Mobility. *Environment and Planning D: Society and Space* 28 (1):17–31.
Crochet JC and Leyvigne J (2008) *Royaume du Maroc Secteur des Déplacements Urbains: Note de Stratégie Sectorielle.* 1 May. Washington, DC: The World Bank.
Daniel R and Render M (2003) From mule tracks to light rail transit tracks. Integrating modern infrastructure in to an ancient city—Jerusalem, Israel. Available at: http://onlinepubs.trb.or g/onlinepubs/circulars/ec058/15_04_daniel.pdf. (accessed March 2018).
Datta A and Ahmed N (2020) Intimate infrastructures: The rubrics of gendered safety and urban violence in Kerala, India. *Geoforum* 110: 67-76.
de Goede M (2012) *Speculative Security: The Politics of Pursuing Terrorist Monies.* Minneapolis: University of Minnesota Press.
de Goede M (2018) The Chain of Security. *Review of International Studies* 44 (1): 24–42.
de Goede M (2020) Finance/security infrastructures. *Review of International Political Economy*. DOI: https://doi.org/10.1080/09692290.2020.1830832.
Désveaux D (2013) Tramways á la Française. Paris: Archibooks.
Dimitriou HT (2011) Transport and city development: Understanding the fundamentals. In: Dimitriou HT & Gakenheimer R (Eds.) *Urban transport in the developing world: A handbook of policy and practice*. Cheltenham: Edward Elgar, 8–40.
Dumper M (2014) *Jerusalem unbound. Geography, history & the future of the holy city.* New York: Columbia University Press.
Easterling, K. (2016). Extrastatecraft: The Power of infrastructure space. London: Verso.
Edwards PN et al. (2009) Introduction: An Agenda for Infrastructure Studies 10 (5): 364-375.
Efrat E and Noble A (1988) Planning Jerusalem. *Geographical Review* 78(4): 387–404.
Eisenbud D (2014) Jerusalem Municipality to Deploy Surveillance Balloons over Arab Neighborhoods. *The Jerusalem Post*, 29 October. Available at: http://www.jpost.com/Israel-News/Jerusalem-Municipality-todeploy-surveillance-balloons-over-Arabneighborhoods-380189. (accessed 17 October 2023)
Elden S (2004) *Understanding Henri Lefebvre. Athlone Contemporary European Thinkers*. London, New York: Bloomsbury Academic.
Elden S (2013) Secure the Volume: Vertical Geopolitics and the Depth of Power. *Political Geography*. Epub ahead of print May 2013. DOI: 10.1016/j.polgeo.2012.12.009.
Elden S (2009) *Terror and Territory. The Spatial Extent of Sovereignty.* Minneapolis MN: University of Minnesota Press.
ELNET (2019) 'Safe & Smart City Conference'. 15 January. Available at: https://elnetwork.eu/country/israel/safe-smart-city-conference/ (accessed: 28 April 2023).
Engels JI (2018) *Key Concepts for Critical Infrastructure Research.* Wiesbaden: Springer Fachmedien.

Farias I and Stemmler S (2012) Deconstructing 'metropolis'. Critical reflections on a European concept. In: Brantz D, Disko S, Wagner-Kyroa G (Eds.) *Thick space. Approaches to metropolitanism*. Bielefeld: Transcript.
Federal Ministry of the Interior (2009) National Strategy for Critical Infrastructure Protection (CIP Strategy). Berlin. Available at: https://www.bmi.bund.de/SharedDocs/downloads/EN/publikationen/2009/kritis_englisch.pdf?__blob=publicationFile&v=1.
Feitelson E and Cohen-Blankshtain G (2018) Public transport planning in a spatially segmented city: The case of Jerusalem. *Transportation Research Part A* 107 65–74.
Fields G (2010) Landscaping Palestine: Reflections of Enclosure in a Historical Mirror. *International Journal of Middle East Studies* 42 (1): 63–82.
Folkers A (2017) Existential Provisions: The Technopolitics of Public Infrastructure. *Environment and Planning D: Society and Space.* Epub ahead of print 12 March 2017. DOI: 10.1177/ 0263775817698699.
Folkers A (2018) *Das Sicherheitsdispositiv der Resilienz: katastrophische Risiken und die Biopolitik vitaler Systeme.* Frankfurt/NewYork: Campus Verlag.
Folkers A (2018) Was ist kritisch an Kritischer Infrastruktur? Kriegswichtigkeit, Lebenswichtigkeit, Systemwichtigkeit und die Infrastrukturen der Kritik. In: Jens-Ivo E and Nordmann A (eds.) *Was heißt Kritikalität? Zu einem Schlüsselbegriff der Debatte um Kritische Infrastrukturen*. Bielefeld: Transcript, 123–154.
Foucault M (1991) *The Foucault Effect: Studies in Governmentality*. Ed. Burchell G, Gordon C et al. Chicago IL: University of Chicago Press.
Foucault M (2007) *Security, territory, population: Lectures at the Collège de France, 1977–78.* Ed. Michael Senellart. Basingstoke: Palgrave Macmillan.
Gilbert A (2008) Bus rapid transit: Is transmilenio a miracle cure? *Transport Reviews* 28 (4): 439–467.
Godard X (2011) Poverty and urban mobility: Diagnosis toward a new understanding. In: Dimitriou HT & Gakenheimer r (eds.) *Urban transport in the developing world: A handbook of policy and practice*. Cheltenham: Edward Elgar, 232–261.
Gordon, N (2011) A villa in the jungle: The Arab awakening through the lens of the Israeli media. *Middle Eastern Law and Governance* 3: 105–117.
Graeber D (2013) It Is Value That Brings Universes into Being. *HAU: Journal of Ethnographic Theory*. Epub ahead of print. DOI: 10.14318/hau3.2.012.
Graham S (2011) *Cities Under Siege: The New Military Urbanism*. Verso Books.
Graham S (2009) When infrastructures fail. In: Graham S (ed.) *Disrupted cities: When infrastructure fails*,1–26. Abingdon, New York: Routledge.
Graham S (2009) *Disrupted Cities: When Infrastructure fails.* New York: Routledge.
Graham S (2018) *Vertical: The City from Satellites to Bunkers*. Verso Books.
Graham S and Marvin S (2001) *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*. Routledge.
Graham S and McFarlane C (eds.) (2015) *Infrastructural Lives. Urban infrastructure in context.* London and New York: Routledge.
Graham S and Baker A (2016) Laboratories of Pacification and Permanent War: Israeli-US Collaboration in the Global Making of Policing. In: Hönke J and Müller MM (eds.) *The Global Making of Policing: Postcolonial Perspectives*. London: Routledge, 40–58.
Grassiani E (2017) Commercialised Occupation Skills: Israeli security experience as an international brand. In: Leese M and Wittendorp S (eds.) *Security/Mobility: Politics of Movement*. Manchester: University Press, 57-74.
Grassiani E (2018) Between Security and Military Identities. The Case of Israeli Security Experts. *Security Dialogue* 49 (1-2): 83–95.
Haller D and Wippel S (2016) Introduction: Focus sur Tanger – Lá où l'Afrique et l'Europe se rencontrent. In: Haller D, Wippel S and Reifeld H (eds.) *Focus sur Tanger: Lá où l'Afrique et l'Europe se rencontrent*. Rabat: Konrad-Adenauer- Stiftung Maroc, 11–21.
Halper J (2015) *War Against the People: Israel, the Palestinians and Global Pacification.* London: Pluto Press.

Harbers H (2005) Epilogue: Political Materials – Material Politics. In: Harbers H (ed.) *Inside the Politics of Technology. Agency and Normativity in the Co-Production of Technology and Society*. Amsterdam: University Press, 257–272.
Harvey P and Knox H (2012) The Enchantments of Infrastructure. *Mobilities.* Epub ahead of print. DOI: 10.1080/ 17450101.2012.718935.
Harvey P, Bruun Jensen C and Morita A (2017) *Infrastructures and Social Complexity: A Companion*. London: Routledge/Taylor & Francis Group.
Hasson N (2009) In Honor of the Light Rail Avshalom Kor is Hebrewizing Jerusalem (Hebrew). *Haaretz*, 28 December. Available at: http://www.haaretz.co.il/news/education/1.1296959. (accessed March 6, 2015).
Hasson N (2010) J'lem Train Company Asks Passengers: 'Do You Mind Traveling with Arabs?'. *Haaretz*, 20 August. Available at: http://www.haaretz.com/print-edition/news/j-lemtrain-company-asks-passengers-do-you-mindtraveling-with-arabs-1.309101. (accessed March 6 2015).
Hasson N (2014) Officials Slam 'Racist' Jerusalem JLR Survey. *Haaretz*, 23 August. Available at: http://www.haaretz.com/print-edition/news/officials-slamracist-jerusalem-light-rail-survey-1.309620?localLinksEnabled=false. (accessed March 6 2015).
Hasson N (2016) Jerusalem mayor: Cable car stop in Palestinian neighborhood will clarify 'who really owns this city. *Haaretz,* 25 August. Available at: https://www.haaretz.com/israel-news/.premium-barkat-east-jerusalem-cable-car-will-clarify-who-really-owns-city-1.5428939 (accessed March 2018).
Hasson N (2017)אורשלים. ישראלים ופלסטינים בירושלים 1967–2017 [Urshalim.Israelis and Palestinians in Jerusalem], 1967-2017 (Hebrew). Tel Aviv: Safrei Aliit HaGag.
Hayes B (2014) The Surveillance-Industrial Complex. In: Ball K, Haggerty KD and Lyon D (Eds.) *Routledge Handbook of Surveillance Studies. Routledge International Handbooks*. Abingdon: Routledge, 167–175.
Hever S (2017) *The Privatisation of Israeli Security*. London: Pluto Press.
Hobart, HJK and Kneese T (eds) (2020) *Radical Care*. Durham: Duke University Press.
Hochmüller, M (2023) Assembling prevention: Technology, expertise and control in postwar Guatemala. *Security Dialogue* 54(1): 54–75.
Höhne S (2012) An endless flow of machines to serve the city. Infrastructural assemblages and the quest for the metropolis. In Brantz D, Disko S, & Wagner-Kyora G. (eds.) *Thick space. Approaches to metropolitanism*. Bielefeld, Piscataway, NJ: Transcript; [distributor] Transaction Publishers (Urban studies).
Hoijtink M (2014) Capitalizing on Emergence: The 'New' Civil Security Market in Europe. *Security Dialogue* 45 (5): 458–475.
Hong C (2022) "Safe Cities" in Pakistan: Knowledge infrastructures, urban planning, and the security state. *Antipode* 54(5): 1476–1496.
Horovitz D (2018) The trouble with Israel's Jewish nation-state law. Available at: https://www.times ofisrael.com/the-trouble-with-israels-jewish-nation-state-law/. (accessed August 2018).
Howe C, Lockrem J et al. (2015) Paradoxical Infrastructures: Ruins, Retrofit, and Risk. *Science, Technology & Human Values.* Epub ahead of print 23 December 2015. DOI: 10.1177/0162243915620017.
Institute for Strategic Analysis and Forecasting (ISAP) (2021) Smart City Project in Kyrgyzstan as a Virtual Policy Tool. 29 October. Available at: https://isap.center/analytics/69 (accessed 24 April 2023).
IoT Now (2019) Jerusalem building one of the largest smart city networks using 'Gigabit Wireless Access' equipment. 19 November. Available at: https://www.iot-now.com/2019/11/19/100036-jerusalem-building-one-largest-smart-city-netw orks-using-gigabit-wireless-access-equipment/
Isin EF (2002) *Being Political: Genealogies of Citizenship.* Minneapolis: University of Minnesota Press.
Jabareen YF (2010) The Politics of State Planning in Achieving Geopolitical Ends. *International Planning Development Review* 32 (1): 27–43.

Jabri V. (2012). The Postcolonial Subject: Claiming Politics/Governing Others in Late Modernity. Abingdon: Routledge.
Jaffe R and Pilo F (2023) Security technology, urban prototyping, and the politics of failure. *Security Dialogue* 54(1): 76–93.
Jasanoff S (2004) Ordering Knowledge, Ordering Society. In: Jasanoff S (ed.) *States of Knowledge: The Co- Production of Science and Social Order.* New York: Routledge, 13–45.
Jefferis D C (2012) The 'Center of Life Policy': Institutionalizing Statelessness in East Jerusalem. *Jerusalem Quarterly* 93: 94–103.
Jensen CB (2015) Experimenting with Political Materials: Environmental Infrastructures and Ontological Transformations. *Distinktion: Journal of Social Theory*. Epub ahead of print 06 August 2015. DOI:10.1080/160091
Jensen CB and Morita A (2015) Infrastructures as Ontological Experiments. *Engaging Science, Technology, and Society*. Epub ahead of print 09 November 2015. DOI: 10.17351/ests2015.007.
JNet, Jerusalem LRT Project (JNet). Jnet - get on board with success (n.y.) https://jlrt.or g.il/ Accessed March 2018.
Joachim JM and Schneiker A (2018) *Private Security and Identity Politics: Ethical Hero Warriors, Professional Managers and New Humanitarians.* Routledge Private Security Studies. London: Routledge/Taylor & Francis Group.
Keane W (2009) On Multiple Ontologies and the Temporality of Things. *Material World*, 7 July. Available at: http://www.materialworldblog.com/2009/07/on-multipleontologies-and-thetemporality-of-things/. (accessed 28 March 2018).
Kerzhner T (2022) Formalization of East Jerusalem public transport: Mobility, politics and planning. *Journal of Transport Geography* 105: 103463.
Kingdom of Morocco (2014) *Third united nations conference on housing and sustainable urban development - Habitat III 2016: National report.* Available at: http://habitat3.org/wp-content/uploads/Morocco-National-Report-Habitat-III-Final-1.pdf (accessed March 2018).
Klein M (2005) Old and New Walls in Jerusalem. *Political Geography* 24 (1): 53–76.
Klein M (2014) *Lives in common: Arabs and Jews in Jerusalem, Jaffa and Hebron.* London: Hurst & Company.
Knoblauch H (2005) Focused Ethnography. *Forum Qualitative Research* 6(3). Available at: http://www.qualitative-research.net/index.php/fqs/article/view/20/43#gcit. (accessed 19 October 2023).
Knox H (2017) Affective Infrastructures and the Political Imagination. *Public Culture*. Epub ahead of print 1 May 2017. DOI: 10.1215/08992363-3749105.
Knox H and Huse, T (2015) Political Materials: Rethinking Environment, Remaking Theory. *Distinktion: Journal of Social Theory*. Epub ahead of print 6 August 2015. DOI: 10. 1080/1600910x. 2015.1028419.
Kooy M and Bakker K (2008) Technologies of Government: Constituting Subjectivities, Spaces, and Infrastructures in Colonial and Contemporary Jakarta. *International Journal of Urban and Regional Research* 32(2): 375–391.
Korpela M (2016) Infrastructure In: Salazar NB and Jayaram K (Eds.) *Keywords of mobility. Critical engagements*. New York/Oxford: Berghahn, 113-132.
Krahmann E (2008) Security: Collective Good or Commodity? *European Journal of International Relations* 14(3): 379–404.
Krahmann E (2018) The Market for Ontological Security. *European Security* 27(3): 356–373.
Laclau E (1990) *New Reflections on the Revolutions of our Time*. London: Verso.
Laclau E and Mouffe C (2001) *Hegemony and Socialist Strategy: Towards a radical democratic politics.* London/New York: Verso, 2001.
Langenohl A (2019) Dynamics of Power in Securitization: Towards a Relational Understanding. In: Langenohl A and Kreide R (Eds.) *The Power Dynamics of Securitization: From the Early Modern Period until the Present.* Baden-Baden: Nomos Verl.-Ges, 19–55.
Langenohl A (2020) Articulating Sovereignty within the Infrastructural Imagination: The Case of the Securitisation of Finance as 'Critical Infrastructure'. *Politikon.* Epub ahead of print 27 January 2020 47. DOI: https://doi.org/10.1080/02589346.2020.1712830.

Langenohl A and Van Riet G (2020) Security infrastructures. *Politikon* 47(1): 1–3.
Lakoff A and Collier S (2010) Infrastructure and Event. The Political Technology of Preparedness. In: Braun B and Whatmore SJ (Eds.) *Political Matter: Technoscience, Democracy, and Public Life*. Minneapolis: University of Minnesota Press, 243–266.
Larkin B (2008) *Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria.* Durham NC: Duke University Press.
Larkin B (2013) The Politics and Poetics of Infrastructure. *Annual Review of Anthropology* 42: 327–343.
Larkin B (2018) Promising Forms: The Political Aesthetics of Infrastructure. In: Anand N, Gupta A and Appel H (eds.) *The promise of infrastructure*. London: Duke University Press, 175–202.
Latour B (2007) *Reassembling the Social: an Introduction to Actor-Network-Theory.* Oxford: Oxford University Press.
Latour B (1992) Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts. In: Bijker WE and Law J (ed.) *Shaping Technology- Building Society*. Massachusetts: MIT Press, 225–259.
Laufenberg M (2020) Radical care and the future of the Welfare State: Contours of a paradoxical politics of care. *BEHEMOTH A Journal on Civilisation* 13(2): 1048.
Leander A (2005) The Market for Force and Public Security: The Destabilizing Consequences of Private Military Companies. *Journal of Peace Research* 42(5): 605–622.
Leander A (2010) Commercial Security Practices. In: Burgess JP *The Routledge Handbook of New Security Studies. Routledge Handbooks*. London: Routledge, 208–216.
Leander A and van Munster E (2007) Private Security Contractors in the Debate About Darfur: Reflecting and Reinforcing Neo-Liberal Governmentality. *International Relations* 21(2): 201–216.
Lecoquierre M (2021) *Emplaced Resistance in Palestine and Israel: The Cases of Hebron, Silwan and al-Araqib*. London: Routledge.
Lefebvre H. (1991). The Production of Space. Oxford, OX, UK: Blackwell.
Lemon E (ed.) (2019) *Critical Approaches to Security in Central Asia*. London: Routledge.
Lindskov JK and Monsees L (2019) Co-Production: The Study of Pro*ductive Processes at the Level of Materiality and Discourse. In: Leese* M and Hoijtnik *M Technology and Agency in International Relations*. London: Routledge, 24–41.
Lottholz P and Manolova P (2022) The politics of urban underdevelopment in Kyrgyzstan and Bulgaria: Community-level self-organization in the absence of infrastructures and services. Connections. A Journal for Historians and Area Specialists. Available at: https://www.connections.clio-online.net/article/id/fda-133276 (accessed 28 April 2023).
Lucas K (2011) Making the connections between transport disadvantage and the social exclusion of low income populations in the Tshwane region of South Africa. *Journal of Transport Geography* 19 (6): 1320–1334.
Lukmanov O (2013) The “Safe City” in Kazakhstan - a brief historical overview. Frontier, 13 April. Available at: https://ru-bezh.ru/arts/zhurnal-1/bezopasnyy-gorod-v-kazahstane-%E2%80%94--kratkiy-istor icheskiy--obzor (accessed 28 April 2023).
Lustick IS (2004) Yerushalayim, al-Quds and the Wizard of Oz: Facing the Problem of Jerusalem after Camp David II and the al-Aqsa Intifada. *The Journal of Israeli History* 23 (2): 200–215.
Lyon D (2009) *Surveillance, Power, and Everyday Life.* Oxford: University Press.
Machold R (2016) Learning From Israel? ‘26/11’ and the Anti-Politics of Urban Security Governance. *Security Dialogue* 47(4): 275–291.
Machold R (2015) Mobility and the model: policy mobility and the becoming of Israeli Homeland Security dominance. *Environment and Planning A: Economy and Space* 47 (4): 816–832.
Mahler GS (2010) *Politics and government in Israel. The maturation of a modern state*. Lanham, MD: Rowman & Littlefield; [distributor] NBN International Ltd.
Marat E and Sutton D (2021) Technological solutions for complex problems: Emerging electronic surveillance regimes in Eurasian cities. *Europe-Asia Studies* 73(1): 243–267.

Marchart O (2007) *Post-Foundational Political Thought: Political Difference in Nancy, Lefort, Badiou and Laclau.* Edinburgh: University Press.
Mazza L (2009) Centenary Paper: Plan and constitution – Aristotle's Hippodamus: Towards an 'Ostensive' Definition of Spatial Planning. *Town Planning Review* 80 (2): 113–141.
McFarlane C (2008) Governing the contaminated city: Infrastructure and sanitation in colonial and post-colonial Bombay. *International Journal of Urban and Regional Research* 32(2): 415–435.
McFarlane C and Rutherford J (2008) Political infrastructures: Governing and experiencing the fabric of the city. *International Journal of Urban and Regional Research* 32(2): 363–374.
MIFTAH (2020) Israeli violations during the Coronavirus pandemic. The Palestinian Initiative for the Promotion of Global Dialogue and Democracy. Available at: http://www.miftah.org/Doc/Specialstudies/2020/Israeli-violations-COVID19En.pdf (accessed 28 April 2023).
Milohova K (2020) 'In a year, "Safe City" cameras recorded more than 1 million violations', Kaktus Media, 27 February. Available at: https://kaktus.media/doc/406870_za_god_kamery_bezopasnogo_goroda_zafiksirovali_bolee_ 1_mln_narysheniy.html (accessed 24 April 2023).
Mitchell T (1988) *Colonising Egypt*. Berkeley CA: University of California Press.
Mitchell T (2014) Introduction: Life of Infrastructure. *Comparative Studies of South Asia, Africa and the Middle East*. Epub ahead of print 01 December 2014. DOI: 10.1215/1089201X-2826013.
Morozov E and Bria F (2018) Rethinking the Smart City: Democratizing Urban Technology, New York City: Rosa Luxemburg Stiftung.
Morrison S (2017) Elevator Fiction: Robert Coover, Colson Whitehead, and the Sense of Infrastructure. *Arizona Quarterly: A Journal of American Literature, Culture, and Theory*. Epub ahead of print 01 September 2017. DOI: 10.1353/arq.2017.0017.
Mouffe C (2008) *The return of the political.* London: Verso.
Mouffe C (2014) By Way of a Postscript. *Parallax* 20 (2): 149–157.
Mouloudi H (2010) Reaction 'from below' to big urban projects: The case of Rabat. *Built Environment* 36(2): 230–244.
Mrázek R (2002) Engineers of Happy Land: Technology and Nationalism in a Colony. Princeton NJ: Princeton University Press.
Nasritdinov E, Zhumakadyr B and Asanalieva D (2015) Myths and realities of Bishkek's novostroikas. In: Laruelle, M and Engvall, J (eds.) Kyrgyzstan beyond "Democracy Island" and "Failing State": Social and Political Changes in a Post-Soviet Society, Lanham: Rowman & Littlefield, 143-164.
Neocleous M (2007) Security, Commodity, Fetishism. *Critique: Journal of Socialist Theory* 25 (3): 339–355.
Nolte A (2016) Political Infrastructure and the Politics of Infrastructure. *City*. Epub ahead of print March 2016. DOI: 10.1080/13604813.2016.1169778.
Nolte A (2023) Ordering Movement and Mobilizing Security: On the Production of 'Critical Infrastructure.' In: Hein-Kircher H and Distler W (eds.) The Mobility-Security Nexus and the Making of Order: An Interdisciplinary and Historicizing Intervention. London: Routledge, 45-68.
Nolte A and Özdemir E (2018) Infrastructuring Geographies. Histories and presents in and of the Middle East. *Middle East - Topics & Arguments* 10: 5–20.
Nolte A and Westermeier C (2020) Between Public and Private: The Co-Production of Infrastructural Security. *Politikon* 47 (1): 62–80.
Nolte A and Yacobi H (2015) Politics, infrastructure and representation: The case of Jerusalem's Light Rail. *Cities* 43: 28–36.
Ong A (2011) Introduction: Worlding cities, or the art of being global. In: Roy A and Ong A (eds.) *Worlding cities: Asian experiments and the art of being global.* Chichester, Malden, MA: Wiley-Blackwell, 1–26.
O'Grady N (2017) Mobility, Circulation, and homomorphism: data becoming risk information." In: Leese M and Wittendorp S (Eds.) *Security/Mobility: Politics of Movement*. Manchester: University Press, 74–89.

Pasternak S and Dafnos T (2018) How does a settler state secure the circuitry of capital? *Environment and Planning D: Society and Space* 36 (4): 739–757.
Paul DE (2004) World cities as hegemonic projects: The politics of global imagineering in Montreal. *Political Geography* 23: 571–596.
Peoples C and Vaughan Willams N (ed.) (2015) *Critical Security Studies: An Introduction.* London/New York: Routledge.
Pfeffer A (2012) Jerusalem's Public Transport System as Metaphor for Israel in 2012. *Haaretz*, 6 January. Available at: http://www.haaretz.com/print-edition/news/jerusalem-spublic-transport-system-as-metaphor-for-israel-in-2012-1.405732. (accessed 6 March 2015).
Public Association 'Civic Union' (2018) Public Safety in the Sverdlovskii district: Analysis, priorities, preventive measures. Available at: https://reforma.kg/media/post/postpdf/2018-05 -23-2122210883.pdf (accessed 24 April 2023).
Public Association 'Civic Union' (2019) Public safety in Leninskii, Pervomaiskii and Oktiabrskii districts of Bishkek: Stakeholder perceptions, statistics, recommendations. United Office for Drugs and Crime, Available at: https://www.unodc.org/documents/centralasia/2019/2._Public_ Safety.pdf (accessed 24 April 2023).
Pullan W (2013) Conflict's Tools. Borders, Boundaries and Mobility in Jerusalem's Spatial Structures. *Mobilities* 8 (1): 125–147.
Pullan W, Sternberg M, Kyriacou L, Larkin C, and Dumper M (eds.) (2013) *The struggle for Jerusalem's holy places.* New York: Routledge.
Pullan W, Misselwitz P, Nasrallah R, and Yacobi H (2007) Jerusalem's Road 1. *City* 11 (2): 176–198.
Rabinow P (1992) France in Morocco: Technocosmopolitanism and middling modernism. *Assemblage* 17: 52–57.
Rachik A. (2002). *Casablanca. L'urbanisme de l'urgence.* Casablanca.
Ranciere J (2004). *Disagreement: Politics and Philosophy*. Trans. Rose J. Minneapolis: University of Minnesota Press.
Reed J (2015) Unit 8200: Israel's Cyber Spy Agency. *Financial Times,* 10 July. Available at: https://www.ft.com/content/69f150da-25b8-11e5-bd83-71cb60e8f08c.
Reeves M (2017) Infrastructural Hope: Anticipating 'Independent Roads' and Territorial Integrity in Southern Kyrgyzstan. *Ethnos* 82 (4): 711–737.
Robinson J (2016) Thinking cities through elsewhere: Comparative tactics for a more global urban studies. *Progress in Human Geography* 40(1): 3–29.
Robinson J (2023) *Comparative Urbanism: Tactics for Global Urban Studies*. Hoboken, NJ: Wiley & Sons.
Rodgers D and O'Neill B (2012) Infrastructural violence: Introduction to the special issue. *Ethnography* 13(4): 401–412.
Rokem J (2013) Politics and Conflict in a Contested City. Urban Planning in Jerusalem under Israeli Rule. *Bulletin du centre de recherche a` Jerusalem* 23: 1–12.
Rokem J, Fregonese S, Ramadan A, Pascucci E, Rosen, G, Charney I, et al. (2017) Interventions in urban geopolitics. *Political Geography* 61: 253–262.
Rokem J and Vaughan L (2018) Segregation, mobility and encounters in Jerusalem: The role of public transport infrastructure in connecting the "divided city". *Urban Studies.* Epub ahead of print 01 February 2017. DOI: https://doi.org/10.1177/0042098017691465.
Roy A and Ong A (Eds.) (2011) *Worlding cities: Asian experiments and the art of being global.* Chichester, Malden, MA: Wiley-Blackwell.
Sadowski J and Bendor R (2019) Selling smartness: Corporate narratives and the smart city as a sociotechnical imaginary. *Science, Technology, & Human Values* 44(3): 540–563.
Said E (1995) Projecting Jerusalem. *Journal of Palestine Studies* 25 (1): 5–14.
Safier M (2001) The Struggle for Jerusalem: Arena of Nationalist Conflict or Crucible of Cosmopolitan Coexistence. *City* 5 (2): 135–168.
Salamanca OJ (2015) Road 443: Cementing dispossession, normalizing segregation and disrupting Palestinian everyday life in Palestine. In: Graham S & C McFarlane C (eds.) *Infrastructural lives: Urbanmon infrastructure in context.* London and New York: Routledge, 114–136.

Sales B (2014) Symbol of Jerusalem's Progress, JLR Becomes Terror Target. *JTA,* 10 November. Available at: http://www.jta.org/2014/11/10/news-opinion/israel-middle-east/symbol-of-jerusalems-progresslight-rail-becomes-terror-target#ixzz3JPhEXmL2. (accessed 17 October 2023).
Sanghera B and Satybaldieva E (2021) *Rentier Capitalism and Its Discontents*. Cham: Springer.
Schwenkel C (2015) Spectacular Infrastructure and Its Breakdown in Socialist Vietnam. *American Ethnologist*. Epub ahead of print 14 August 2015. DOI: 10.1111/amet.12145.
Scott JC (1988) *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. London: Yale University Press.
Schulze M (2017) *From Cyber-Utopia to Cyber-War. Normative Change in Cyberspace.* Unpublished PhD thesis, Friedrich-Schiller-Universität Jena.
Seidemann D (2015) A geopolitical atlas of contemporary Jerusalem. Available at: Terrestrial Jerusalem. http://t-j.org.il/JerusalemAtlas.aspx (accessed March 2018).
Shalhoub-Kevorkian N (2015) *Security Theology, Surveillance and the Politics of Fear*. Cambridge: Cambridge University Press.
Sheller M and Urry J (2006) The New Mobilities Paradigm. *Environment and Planning A: Economy and Space* 38 (2): 207–226.
Sherwood H (2014) Jerusalem's JLRway: Commuting with a Rifle Through the Conflicted City. *The Guardian,* 19 May. Available at: http://www.theguardian.com/cities/2014/may/29/jerusalems-light-railway-commuting-with-a-riflethrough-the-conflicted-city. (accessed March 6, 2015).
Shlay AB and Rosen G (2010) Making Place: The Shifting Green Line and the Development of 'Greater' Metropolitan Jerusalem. *City & Community* 9 (4): 358–389.
Shlomo O (2017) The governmentalities of infrastructure and services amid urban conflict: East Jerusalem in the post Oslo era. *Political Geography* 61: 224–236.
Shoval N (2013) Street-naming, Tourism Development and Cultural Conflict: The Case of the Old City of Acre/Akko/Acca. *Transactions of the Institute of British Geographers* 38 (4): 612–626.
Simone AM (2004) People as Infrastructure: Intersecting Fragments in Johannesburg. *Public Culture* 16(3): 407–429.
Simone A (2021) Ritornello: 'People as infrastructure'. *Urban Geography* 42(9): 1341-1348.
Simon S and de Goede M (2015) Cybersecurity, Bureaucratic Vitalism and European Emergency. *Theory, Culture & Society* 32(2): 79–106.
Star S L (1999) The Ethnography of Infrastructure. *American Behavioral Scientist* 43: 377–391.
Star SL (2002) Infrastructure and Ethnographic Practice: Working on the Fringes. *Scandinavian Journal of Information Systems* 14 (2): 108–122.
Steele W, Hussey K and Dovers S (2017) What's Critical about Critical Infrastructure? *Urban Policy and Research* 35 (1): 47–86.
Stern I (2018) Lana Del Rey cancels Israel show, cites inability to schedule Palestinian concert. *Haaretz*, 1 September. Available at: https://www.haaretz.com/israel-news/.premium-after-bds-pressure-lana-de l-rey-cancels-israel-show-1.6433887. (accessed September 2018).
Stevens T (2016) *Cyber Security and the Politics of Time.* Cambridge: Cambridge University Press.
Stockmarr L (2016) Beyond the Laboratory Thesis: Gaza as Transmission Belt for War and Security Technology. In: Hönke J and Müller MM (Eds.) *The Global Making of Policing: Postcolonial Perspectives*. London: Routledge, 59–76.
Strava C (2018) A tramway called atonement: Genealogies of infrastructure and emerging political imaginaries in contemporary Casablanca. *Middle East- Topic & Arguments* 10: 22–29.
Tabansky L (2013) Critical Infrastructure Protection. *International Journal of Cyber Warfare and Terrorism* 3(3): 80–87.
Thawaba S and al-Rimmawi H (2013) Spatial Transformation of Jerusalem: 1967 to Present. *Journal of Planning History* 12 (1): 63–71.

The Care Collective (eds) (2020) *The Care Manifesto: The Politics of Interdependence*. New York: Verso.
The Invisible Committee (2015) *To Our Friends: A reflection on, and an extension of, the ideas laid out seven years ago in The Coming Insurrection.* Cambridge: The MIT Press.
Timber C and Greene J (2019) WhatsApp Accuses Israeli Firm of Helping Governments Hack Phones of Journalists, Human Rights Workers, *The Washington Post*, 29 October. Available at: https://www.washingtonpost.com/technology/2019/10/29/whatsapp-accuses-israeli-firm-helpinggovernments-hack-phones-journalists-human-rights-workers/.
Tokoeva A (2018) What is a "Smart City" and how are the authorities implementing it in Kyrgyzstan?. Kloop, 7 May. Available at: https://kloop.kg/blog/2018/05/07/chto-takoe-umnyj-gorod-i-kak-vlasti-vnedryayut-ego-v-kyr gyzstane/ (accessed 23 April 2024).
Tulumello S (2020) Agonistic security: Transcending (de/re)constructive divides in critical security studies. *Security Dialogue* 52(4): 325–342.
Tzidkiyahu E (2022) Understanding political violence in Jerusalem. Bulletin de l'Observatoire international du religieux, N°38, July 2022, Available at: https://obsreligion.cnrs.fr/bulletin/understanding-political-violence-in-jerusalem/ (accessed 23 April 2024).
United Nations Populations Fund (UNFPA) (2020) Evaluation of GPI Project "Addressing Social Disparity and Gender Inequality to Prevent Conflicts in New Settlements in Bishkek". Available at: https://mptf.undp.org/project/00108093 (accessed 23 April 2024).
United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNWRA) (n.d.) Demolition Watch. Available at: https://www.unrwa.org/demolition-watch (accessed 23 April 2024).
Urban Studies (2021) Special Issue: Smart cities between worlding and provincializing. 58(3).
Usher M (2014) Veins of Concrete, Cities of Flow: Reasserting the Centrality of Circulation in Foucault's Analytics of Government. *Mobilities* 9 (4): 550–569.
Vaughan-Williams N and Lundborg T (2011) Resilience, Critical Infrastructure and Molecular Security: The Excess of 'Life' in Biopolitics. *International Political Sociology* 5: 367–383.
Vesti.kg (2019) It will become brighter in Bishkek neighborhoods. 17 April. Available at: https://vesti.kg/obshchestvo/item/60376-v-zhilmassivakh-bishkeka-stanet-svetlee.html (Accessed: 28 April 2023).
Volinz L (2018) Governance Through Pluralization. Jerusalem's Modular Security Provision. *Security Dialogue* 49(6): 438–456.
Von Schnitzler A (2015) Ends. In The infrastructure toolbox. *Cultural anthropology online,* 24 September. Available at: https://culanth.org/fieldsights/714-introduction-the-infrastructure-toolbox. (accessed March 2018).
Von Schnitzler A (2016) *Democracy's Infrastructure: Techno-Politics and Protest after Apartheid*. Princeton University Press.
Wakefield S (2018) Infrastructures of Liberal Life: From Modernity and Progress to Resilience and Ruins. *Geography Compass* 12(7): 1–14.
Weizman E (2012) *Hollow Land: Israel's Architecture of Occupation*. London: Verso Books.
Westermeier C and de Goede M (2021) *Infrastructural Geopolitics*. Unpublished manuscript.
Wharton L (2018) Jerusalem under Nir Barkat. Three dangerous approaches to the city's future. *Palestine-Israel Journal* 22/23(4/1): 49–56.
Who Profits Research Center (2016) Private Security Companies and the Israeli Occupation. Available at: https://www.whoprofits.org//writable/uploads/publications/1668628693_c198e9ad5a8d7a69ef3b.pdf (Aaccessed 28 April 2023).
Wibben ATR (2020) Everyday security, feminism, and the continuum of violence. *Journal of Global Security Studies* 5(1): 115–121.
Wimmer A and Schiller G (2002) Methodological Nationalism and Beyond: Nation–state Building, Migration and the Social Sciences. *Global Networks* 2(4): 301–334.
Winner L (1980) Do Artifacts Have Politics? *Daedalus* 109(1): 121–136.
Wippel S (2016) La réémergence d'un carrefour interrégional: Tanger et ses infrastructures dans les réseaux transnationaux de commerce et de transport. In: Haller D, Xu F & Manibog F (2016) *Morocco urban transport sector development policy loan: Project performance assessment report.* 14 June. Washington, DC: The World Bank.

Yacobi H (2012) Borders, Boundaries and Frontiers. Notes on Jerusalem's Present Geopolitics. *Eurasia Border Review* 32: 55–69.
Yanovski R (2015) Security Guard Recalls Terror Attack: We Saw Him Pull Out His Cleaver. *Ynet*, 6 March. Available at: http://www.ynetnews.com/articles/0,7340,L-4634139,00.html.
Yiftachel O (1998) Planning and Social Control: Exploring the Dark Side. *Journal of Planning Literature* 14 (4): 395–406.
Yiftachel O (2009a) Critical Theory and "Gray Space": Mobilization of the Colonized. *City* 13 (2–3): 240–256.
Yiftachel O (2009b) Theoretical Notes on "Gray Cities": The Coming of Urban Apartheid. *Planning Theory* 8: 88–100.
Young D and Keil R (2010) Reconnecting the disconnected: The politics of infrastructure in the in-between city. *Cities* 27(2): 87–95.
Yusupova, D (2018) What we know about the company "Vega", the winner of the "Safe City" tender. Kaktus Media. 5 September. Available at: https://kaktus.media/doc/379292_chto_izvestno_o_koncerne_vega_pobeditele_tendera_bezopasnyy_gorod.html (accessed 28 April 2023).