

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

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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 infra-

structures, 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

Infrastructures, as fundamental components of modern human life, offer a rich empirical field to study complex socio-political 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.) and thus as “compelling sites for qualitative social research” (Harvey et al. 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 3), attending to everyday engagements with material formations and to the agency of objects, materials and things (Latour, *Reassembling the Social*; Latour, “Missing Masses”; Jensen and Morita). Through this turn, “materials themselves are being recognized as specific, relational, agential and, importantly, political” (Knox 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 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, “Infrastructure and Ethnographic Practice”; Jensen and Morita).

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. 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 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 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, “Politics and Poetics” 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 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 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.; Graeber; Keane). 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 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 4) 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” (von Schnitzler). 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).

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 (Nolte). 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; Knox and Huse), infrastructures are ideological constructs that equally embody and enforce power relations (Akhter). 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.; Larkin, “Politics and Poetics”; Nolte and Yacobi; Harvey et al.; Scott). It helps to link infrastructure and its representation to ideologies of progress and development (Harvey et.al. 37; Scott; Kooy and Bakker). 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 (“Politics and Poetics” 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 real-

ization 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 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 a new means of manufacturing the experience of the real” (Mitchell, *Colonizing Egypt* 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. 37), disciplining and governing entire areas and creating populations, making them “legible” (Harvey et al. 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 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, *Reassembling the Social*).

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 4). We believe that infrastructure studies is a field 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, "Infrastructure and Ethnographic Practice"; Star, "Ethnography of Infrastructure"; Larkin, *Signal and Noise*; Graham and Marvin) 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, "Life of Infrastructure"; Larkin, "Politics and Poetics"). 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 colo-

nial 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.). 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.) 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, "Life of Infrastructure"): 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 hyper-visible in the techno-political arena. They may signify a historical or ideological

project – whether it is one of socialist modernization (Schwenkel) or nation-building (Mrázek). 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 122). In other words, infrastructures are “imaginative resources” (Knox 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 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). 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” (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), 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; Elden, "Secure the Volume"; Graham, *Vertical*). Opposing the "dominance of remarkably flat perspectives about human societies in key academic debates about cities and urban life (Graham, *Vertical* 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, *Vertical* 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, "Secure the Volume" 7; Graham, *Vertical*; Morrison, "Elevator Fiction"), 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 in shaping 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, "Secure the Volume" 2). Infrastructure, then, is a powerful tool in doing and undoing territory.

While de-territorializing practices are closely tied with forms of territorialization (Elden, *Terror and Territory* 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). 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, "Road 443"). 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, *Cities Under Siege*; Weizman). 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 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 MENA-region 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 pre-conceived 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 Casablancon tramway demonstrates how state provisionings of urban transportation services not only visibilize already existing social divisions, but also enable disenfranchised urban populations to par-

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 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” (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” (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 (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 minibuses constitute alternative ways of mobility and

connection, which are operated as collaborative practices (Simone). 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, *Vertical* 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'" (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 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" (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 state-sponsorship 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

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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 Abdoumalig 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 Glick Schiller). That is, instead of presuming the existence of bounded national entities, we pay attention to the constitution of subjectivities and imagined communities (Anderson) 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* infra-

structures 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). 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 many-layered 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.

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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.

Works Cited

- Akhter, Majed. "Infrastructure Nation: State Space, Hegemony, and Hydraulic Regionalism in Pakistan." *Antipode*, vol. 47, no. 4, 2015, pp. 849-870. Doi: 10.1111/anti.12152.
- Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Verso, 2006.
- Angelo, Hillary, and Christine Hentschel. "Interactions with Infrastructure as Windows into Social Worlds: A Method for Critical Urban Studies: Introduction." *City*, vol. 19, no. 2-3, 2015, pp. 306-312. Doi: 10.1080/13604813.2015.1015275.
- Appel, Hannah, Anand, Nikhil and Gupta, Akhil. "Introduction: The Infrastructure Toolbox." *Cultural Anthropology*, 24 Sept. 2015, <https://culanth.org/fieldsights/714-introduction-the-infrastructure-toolbox>. Accessed 28 March 2018.
- Bowman, Glenn W. "Refiguring the Anthropology of the Middle East and North Africa." *The SAGE Handbook of Social Anthropology*, edited by Richard Fardon et al., vol. 1, SAGE, 2012, pp. 678-710.
- Bijker, Wiebe E., and John Law. *Shaping Technology/Building Society: Studies in Sociotechnical Change*. Massachusetts Institute of Technology, 2000.
- Carrithers, Michael, et al. "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*, vol. 30, no. 2, 2010, pp. 152-200. Doi: 10.1177/0308275X09364070.
- Edwards, Paul N., et al. "Introduction: An Agenda for Infrastructure Studies." *Journal of the Association for Information Systems*, vol. 10, no. 5, 2009, p. 6.
- Elden, Stuart. "Secure the Volume: Vertical Geopolitics and the Depth of Power." *Political Geography*, vol. 34, May 2013, pp. 35-51. Doi: 10.1016/j.polgeo.2012.12.009.
- . *Terror and Territory. The Spatial Extent of Sovereignty*. U of Minnesota P, 2009.
- Folkers, Andreas. "Existential Provisions: The Technopolitics of Public Infrastructure." *Environment and Planning D: Society and Space*, vol. 35, no. 5, 2017, pp. 855-874. Doi: 10.1177/0263775817698699.
- Foucault, Michel. *The Foucault Effect: Studies in Governmentality*. U of Chicago P, 1991.
- Graeber, David. "It Is Value That Brings Universes into Being." *HAU: Journal of Ethnographic Theory*, vol. 3, no. 2, 2013, pp. 219-243. Doi: 10.14318/hau3.2.012.
- Graham, Stephen, and Simon Marvin. *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*. Routledge, 2001.
- Graham, Stephen. *Cities Under Siege: The New Military Urbanism*. Verso Books, 2011.
- . *Vertical: The City from Satellites to Bunkers*. Verso Books, 2018.
- Harvey, Penny, and Hannah Knox. "The Enchantments of Infrastructure." *Mobilities*, vol. 7, no. 4, 2012, pp. 521-536. Doi: 10.1080/17450101.2012.718935.
- Harvey, Penelope, et al. *Infrastructures and Social Complexity: a Companion*. Routledge, 2017.
- Howe, Cymene, Jessica Lockrem, Hannah Appel, Edward Hackett, Dominic Boyer, Randal Hall, Matthew Schneider-Mayerson, Albert Pope, Akhil Gupta, Elizabeth Rodwell, Andrea Ballestero, Trevor Durbin, Farès el-Dahdah, Elizabeth Long, and Cyrus Mody. *Science, Technology & Human Values*, vol. 41, no. 3, 2015, pp. 547-565. Doi: 10.1177/0162243915620017
- Jensen, Casper Bruun. "Experimenting with Political Materials: Environmental Infrastructures and Ontological Transformations." *Distinktion: Journal of Social Theory*, vol. 16, no. 1, 2015, pp. 17-30. Doi:10.1080/1600910x.2015.1019533.
- Jensen, Casper Bruun, and Atsuro Morita. "Infrastructures as Ontological Experiments." *Engaging Science, Technology, and Society*, vol. 1, 2015, pp. 81-87. Doi: 10.17351/ests2015.007.
- Keane, Webb. "On Multiple Ontologies and the Temporality of Things." *Material World*, 7 July 2009, <http://www.materialworldblog.com/2009/07/on-multiple-ontologies-and-the-temporality-of-things/>. Accessed 28 March 2018.
- Knox, Hannah. "Affective Infrastructures and the Political Imagination." *Public Culture*, vol. 29, no. 282, 2017, pp. 363-384. Doi: 10.1215/08992363-3749105.
- Knox, Hannah, and Tone Huse. "Political Materials: Rethinking Environment, Remaking Theory." *Distinktion: Journal of Social Theory*, vol. 16, no. 1, 2015, pp. 1-16. Doi: 10.1080/1600910x.2015.1028419.

- Kooy, Michelle, and Karen Bakker. "Technologies of Government: Constituting Subjectivities, Spaces, and Infrastructures in Colonial and Contemporary Jakarta." *International Journal of Urban and Regional Research*, vol. 32, no. 2, 2008, pp. 375-391.
- Larkin, Brian. *Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria*. Duke UP, 2008.
- . "The Politics and Poetics of Infrastructure." *Annual Review of Anthropology*, vol. 42, no. 1, 2013, pp. 327-343. Doi: 10.1146/annurev-anthro-092412-155522.
- Latour, Bruno. *Reassembling the Social: an Introduction to Actor-Network-Theory*. Oxford UP, 2007.
- . "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." *Shaping Technology-Building Society. Studies in Sociotechnical Change*, edited by Wiebe Bijker and John Law, MIT Press, 1992, pp. 225-259.
- Mitchell, Timothy. *Colonising Egypt*. U of California P, 1988.
- . "Introduction: Life of Infrastructure." *Comparative Studies of South Asia, Africa and the Middle East*, vol. 34, no. 3, 2014, pp. 437-439. Doi: 10.1215/1089201X-2826013.
- Morrison, Spencer. "Elevator Fiction: Robert Coover, Colson Whitehead, and the Sense of Infrastructure." *Arizona Quarterly: A Journal of American Literature, Culture, and Theory*, vol. 73, no. 3, 2017, pp. 101-125. Doi: 10.1353/arq.2017.0017.
- Mrázek, Rudolf. *Engineers of Happy Land: Technology and Nationalism in a Colony*. Princeton UP, 2002.
- Nolte, Amina, and Haim Yacobi. "Politics, infrastructure and representation: The case of Jerusalem's Light Rail." *Cities*, vol. 43, 2015, pp. 28-36.
- Nolte, Amina. "Political Infrastructure and the Politics of Infrastructure." *City*, vol. 20, no. 3, Mar. 2016, pp. 441-454. Doi: 10.1080/13604813.2016.1169778.
- Reeves, Madeleine. "Infrastructural Hope: Anticipating 'Independent Roads' and Territorial Integrity in Southern Kyrgyzstan." *Ethnos*, vol. 82, no. 4, 2017, pp. 711-737. Doi: 10.1080/00141844.2015.1119176.
- Salamanca, Omar Jabary. "Road 443: Cementing Dispossession, Normalizing Segregation and Disrupting Everyday Life in Palestine." *Infrastructural Lives: Urban Infrastructure in Context*, edited by Stephen Graham and Colin McFarlane, Routledge, 2015.
- Schwenkel, Christina. "Spectacular Infrastructure and Its Breakdown in Socialist Vietnam." *American Ethnologist*, vol. 42, no. 3, 2015, pp. 520-534. Doi: 10.1111/amet.12145.
- Scott, James C. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale UP, 1998.
- Simone, AbdouMaliq. "People as Infrastructure: Intersecting Fragments in Johannesburg." *Public Culture*, vol. 16, no. 3, 2004, pp. 407-429.
- Star, Susan Leigh. "The Ethnography of Infrastructure." *American Behavioral Scientist*, vol. 43, no. 3, 1999, pp. 377-391. Doi: 10.1177/00027649921955326.
- . "Infrastructure and Ethnographic Practice: Working on the Fringes." *Scandinavian Journal of Information Systems*, vol. 14, no. 2, 2002, pp.108-122.
- von Schnitzler, Antina. "Ends." *Cultural Anthropology*, 2015, <https://culanth.org/fieldsights/713-ends>. Accessed 25 March 2018.
- Weizman, Eyal. *Hollow Land: Israel's Architecture of Occupation*. Verso Books, 2012.
- Wimmer, Andreas, and Glick Schiller, Nina. "Methodological Nationalism and Beyond: Nation-state Building, Migration and the Social Sciences." *Global Networks*, vol. 2, no. 4, 2002, pp. 301-334. Doi: 10.1111/1471-0374.00043.
- Winner, Langdon. "Do Artifacts Have Politics?" *Daedalus*, vol. 109, no. 1, 1980, pp. 121-136.