

GEOGRAPHIES OF INFRASTRUCTURE, STATE-MAKING AND POLITICAL SUBJECTIVITY

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Organizers:

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In this session, we are interested in facilitating a discussion about approaches to the study of infrastructure ('material forms that allow for the possibility of exchange over space'—Larkin, 2013) in human geography, especially as it relates to processes of state making and the formation of political subjectivity. Recently, there has been a flourishing of literature seeking to forefront and theorize infrastructure as both a complex, socio-technical system and as a critical political field. Scholarship on urban infrastructures and global logistics has highlighted the complex political economies and geopolitics at work within often 'invisible' everyday infrastructures (Graham et al, 2010). There is simultaneously increasing interest in the subjectivities and affectivities of infrastructures, which has called attention to the complex and fraught relationship among states, political subjectivities and the lively materialities of infrastructures (Barker, 2005; Larkin, 2013; Amin, 2014; Anand 2011; Harvey 2010). From the biopolitics at work in and through everyday infrastructures, to 'hyper visible' infrastructure projects that serve as a powerful form of 'political address', infrastructures and processes of governance and state-making are intimately intertwined. At the same time, authors have also highlighted the divergent and contested subjectivities that emerge through infrastructural encounters, demonstrating the precarity of infrastructure as a vehicle of state power. This panel series features two paper sessions that deliberate the theory, method, and empirical analysis of research findings around the themes of [panel 1] surveillance and conflict [panel 2] geopolitics and locality. A third session [panel 3] features a roundtable discussion of future research agendas and the merits of comparative analysis.

PAPER SESSION 1 Geographies of infrastructure, state-making and political subjectivity I: SECURITY AND CONFLICT

Chair: **Katharine Rankin**

Disrupted waters: the uneven hydro-social geographies and infrastructural violence of Delhi's 2016 water crisis

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In February of 2016, a water emergency was declared in India's capital, instigated by Jat groups in Haryana that prevented a major artery of Delhi's water supply from entering the metropolis. While the disrupted infrastructure has been portrayed by the government and media as producing a citywide crisis in which taps went dry, this paper instead shows that stalled water flows produced highly uneven discursive, situated and embodied effects in the city. This analyses builds on a growing

literature that reveals how urban infrastructure, rather than being an apolitical backdrop, is both an instrument of governance and socio-technical assemblage that actively shapes urban society, social inequity, and unequal urban experiences (McFarlane and Rutherford, 2008; Gabriel 2014; Amin, 2014; Silver, 2016). In particular, I demonstrate that the water crisis furthered unequal hydro-social geographies in the city and differentiated forms of infrastructural violence (Rodgers and O'Neill, 2012). First, I examine the political and discursive effects of Delhi's disrupted infrastructure. I trace how the network's interruption became utilized as an instrument of governance, cast by the state as an exceptional occurrence, rather than symptomatic of an everyday reality of contested disruptions and diverse delivery configurations in which significant numbers of urbanites are unable to access sufficient water in the first place. Second, I investigate the situated effects of the crisis, in which the state's illegible flow and stoppage of water perpetuated already unequal hydro-social geographies across the cityscape. Finally, I examine the uneven embodied repercussions of Delhi's declared water emergency, in which the physical and affective consequences of the crisis ironically revealed an everyday, rather than exceptional, experience of urban infrastructural violence in the capital.

***The governmentalities of infrastructure and services amidst urban conflict:
The case of East Jerusalem***

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Jerusalem is well known as an ethno-national divided city and as bone of contention of the Israeli-Palestinian conflict. Yet, while in the last two decades multidimensional segregation and inner borders have dominated the critical research about Jerusalem, a significant political process of Israeli involvement in the management and control of Palestinian urban infrastructure and services (UIS) has taken place. In this paper I term this new development a governmentalization process that has taken place in East Jerusalem (EJ) since roughly the turn of the millennium. This process is characterized by growing managerial, budgetary, and functional affiliations between Israeli state apparatus and Palestinian UIS – which have operated since the Israeli occupation and annexation of EJ to Israel, with considerable disassociation from state mechanisms as a manifestation of separatism and resistance to Israeli rule (for example: schooling and sharia courts, local public transport and parts of power and water supply systems). This process has resulted in reproduction of political subjectivities and urban relations manifested in increasing dependency and forced adaptation of the Palestinian population and key urban actors to Israeli rule.

In addition to analysis of new developments in the Israeli-Palestinian conflict in Jerusalem, this paper suggests to utilize insights from the study of the politics of infrastructure as an epistemological lens in order to better understand and analyze urban conflict's political dynamic and development. This methodological assumption is in line with the growing body of literature which addresses UIS as a means through which urban power relations and forms of violence are mediated and materialized. From this perspective, the governance, the production, and the provision of UIS appear as a site of negotiation, tension and struggle between different interest groups and actors over not only urban resources, but also of power, authority and governmentality.

Building on this framework, In this paper I seek to expand on the notion of political UIS by looking at the ways the control and management of public transport and schooling in EJ serve as carriers and generators of governmentality (and counter-governmentality), used by various actors in order to

achieve dominance and influence over space and populations. In the case of Jerusalem, through the control and management of UIS, Israeli state agencies seek to produce effectiveness of sovereignty over urban space and population, and Palestinians tried to resist and maintain separate urban functionality and identity in the face of Israeli rule. Hence, in the context of this urban conflict, UIS manifest governmental presence, but also values and ideas, which contribute to the construction of space and population as objects and subjects of government.

Political engineering: the tangle of infrastructure, security and state authority in contemporary statebuilding interventions

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Peer Schouten

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Can roads literally lead to peace? While perhaps an odd question to ask, contemporary international interventions—collective efforts by the UN, donor countries, and development organizations—increasingly deploy infrastructure in efforts to attain highly contested outcomes, such as security and the extension of state authority, in conflict environments. Electricity, buildings, sewage but particularly roads are tangled into efforts to create peace and rebuild states. Drawing on science and technology studies (STS) we understand these practices as an instance of what we call political engineering, that is, technopolitical efforts to conjure novel—better—societies through interventions into the built environment. While STS has long focused on the social as an almost unintended outcome of the proliferation of large technical systems, political engineering does the opposite: it explicitly strategizes infrastructure systems to transform societies. Focusing on contemporary Western stabilization efforts in Sub-Saharan Africa, we ask, how do such interventions create new publics? How can we conceptualize the assemblages of (always too little) peace, security and state authority emerging around contested—and potentially violent—transnationalized power configurations? How can we conceptually grasp what is at stake in infrastructure interventions and their attendant formation of new political spaces?

Advancing spatial hegemonic projects through transport infrastructure: highspeed rail development in a contested nation-state

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The political mobilization of major transport infrastructure in producing regional or national spaces has recently received significant attention by human geographers and other social scientists. On the one hand, transport infrastructure has been seen as central to the constitution and repositioning of city regions within circuits of capital accumulation (Prytherch, 2010); on the other, it has long been used as a tool for consolidating a contested national space by promoting its spatial integration (Bel, 2012). This paper argues for a joint consideration of political economic and nation-building dimensions when examining the use of transport infrastructure in building regional or national spaces. In

particular, it proposes to use the notion of spatial hegemonic project instead of nation- and region-building projects in order to account for the complex ways nation-building and political economic motives converge and intertwine in the production of a particular space through infrastructure. By examining the case of a highspeed rail line in the Spanish Basque Country, a region with a strong nationalist movement within a contested nation-state, it shows how a single piece of highly visible infrastructure has been mobilized to advance two different hegemonic projects. Each of them presented distinct state-building, nation-building and political economic dimensions, and were in turn underpinned by partially competing spatial imaginaries. On the whole, the paper illustrates the centrality that infrastructures and space may have in the nature and promotion of hegemonic projects.

PAPER SESSION 2 Geographies of infrastructure, state-making and political subjectivity II:
SURVEILLANCE AND TECHNOLOGY

Database nation: language and the automatic production of national infrastructures

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Examinations of the connections between sovereignty and the materialities of technological systems, infrastructural capacity and logistical centres have provided new insights into traditional issues of statehood and nation-building in recent years. These national infrastructures contribute in subtle ways to the emergence of both state forms and banal forms of nationalism. We maintain that recent developments in the automatic production of space or of code/space – in which computer codes, Big Data and associated infrastructures are increasingly being used to shape the spatial contours of human existence – is further entrenching unnoticed forms of national socio-spatial consciousness that, arguably, lie beyond banality. Drawing on documentary research and interviews conducted with those concerned with the production of spatial data in the UK – specifically the linguistic forms and place names used in textual and graphical data bases – we explore how the increased automation and standardisation of spatial data is furthering an almost wholly imperceptible form of nationalism. We conclude by discussing the opportunities that might exist to contest infrastructures of techno-nationalism that lie beyond banality.

People as (digital) infrastructure: digital divides, urban divides, and ethnography of the future.

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Business models, languages, and tools travel fast across the world, through very specific spatial technologies like startup incubators and accelerators. Having recognised the importance of such spaces, cities in the global South are promoting these kind of institutions in urban areas of both poverty and informality. In the townships of Cape Town, government, private companies and international NGOs have experimentally established a number of these digitally connected co-working hubs. These spaces are seen as key in spurring digital startups at the bottom of the pyramid, a metaphor that late business guru C. K. Prahalad (2009) used to describe the idea of fighting poverty through profit and entrepreneurial innovation coming from the bottom billions of the world's poor.

This paper narrates the events of a weekend-long entrepreneurial contest in one of these business incubators in Khayelitsha, Cape Town's largest slum. During the competition, some eighty young, prospective entrepreneurs were asked to team and come up with a business idea for a digital service (a web app), on the basis of a format, Startup Weekend, which belongs to Google. As the weekend unfolded, it became clear that there was a wide disjuncture between the desires of the organisers and the business ideas that were created thereof. Most teams ignored the brief of the contest, and explored business models based on disconnection, soft technologies, human capital, bypassing the digital divide that characterises places like Khayelitsha. In that, I argue, there was a shared recognition of the economic value of people as infrastructure (Simone, 2004), in particular, of social ties that work as channels connecting the gaps of a digitally (and physically) divided city.

As Elyachar suggests (2012), the recognition of people as infrastructure bears economic and political consequences—in particular in the wake of platform capitalism—but also, as I will discuss, a methodological one: how to do an ethnography of the future, as in the case of a fragile infrastructure that only exists in a business model?

Elyachar, J. (2012). Next practices: Knowledge, infrastructure, and public goods at the bottom of the pyramid. *Public Culture*, 24(1 66), 109-129.

Prahalad, C. K. (2009). *The fortune at the bottom of the pyramid, revised and updated 5th anniversary edition: Eradicating poverty through profits*. FT Press.

Simone, A. M. (2004). People as infrastructure: intersecting fragments in Johannesburg. *Public culture*, 16(3), 407-429.

Infrastructures of preemption. The example of event-based surveillance in public health

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Infrastructures have been analyzed as performative in a regime of visibility (Sanches, 2016). Technologies, established routines and connections enable the movement of matter, but also determine the matter that can be moved (Gillespie, 2014). The paper looks at digital infrastructures, - algorithms and databases - in order to point out how the processing of information does constrain truths, concepts and practices. The empirical examples are taken from recent developments in public health surveillance. New systems of event-based surveillance have recently been heralded as tools to increase situational awareness and early detection. Event-based surveillance revolves around an algorithmic pattern detection instead of registering incidences of disease (Velasco u. a., 2014). Often, health related data from different places and several non-disease specific datasets sets (Twitter posts, pharmacy sales, school absenteeism) are included to allow this pattern recognition. A new digital infrastructure is established. Drawing back on the notion of the immutable mobile and the concept of circulating reference (Latour, 1999), the paper considers the processes of inscription necessary for the functioning of the digital infrastructure underlying event-based surveillance. It is discussed, how infrastructure impacts the perception of health, security and prevention.

PAPER SESSION 3 Geographies of infrastructure, state-making and political subjectivity III:
GEOPOLITICS AND DEVELOPMENT

Chair: **Dinesh Paudel**

Chinese Narratives on “One Belt One Road” (一帶一路) in Geopolitical and Imperial Contexts

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This article reviews Chinese-language writings on the ideas of a Silk Road Economic Belt and Maritime Silk Road that have proliferated in the last few years, now under the aegis of and visualized as One Belt, One Road (一帶一路). We examine how these narratives articulate with geopolitical/strategic ones in China before exploring the history of the idea of Silk Road(s). An excavation of their origins in nineteenth century European imperial geography leads us to reflect on the past and present relations between states, empires and geopolitics and to chart the range of responses to One Belt, One Road.

Do local communities benefit from state-built transport infrastructure? Contested perceptions and uses of the Baikal-Amur Mainline

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The Baikal-Amur Mainline (BAM) is a railway line in Eastern Siberia, built as part of the Soviet policy of “mastering the North” and exploiting its untapped natural resources. Glorified by propaganda as a symbol of national unity and development, it largely failed to bring the promised prosperity and mobility to the Northern communities. Indeed, the project had been devised to foster industrial growth and cargo transport infrastructure development rather than to improve local people’s individual mobility. Nonetheless, the BAM shaped the entire region: a multitude of settlements was founded, amongst them respectably sized cities; the region saw a tremendous growth and diversification of its population; new social realities were produced.

The current research looks into past and current developments of the BAM infrastructure and its social agency, relying on the dichotomies of accessibility/remoteness, mobility/immobility, inclusion/exclusion as primary analytical categories. Qualitative data collected in ethnographic field stays is related to data from a questionnaire-based mobility survey. The findings demonstrate the contrasting roles of the BAM as both a social phenomenon and a transport infrastructure. It tells the story of a railway line which, despite its tremendous impacts on community development and peoples’ lives, until today plays only a modest role in passenger transport and in the overall mobility of the local population.

Transnational rationalities of roads: Foreign aid and transportation infrastructure development in Nepal

Elsie Lewison and Katharine Rankin

Department of Geography, University of Toronto

There is a rich body of literature examining roads as 'technologies of power' in practices of state territorialisation. Yet, in the Nepal context, where the road network has taken shape through large flows of foreign capital and powerful international interests, the relationship of road-building and state-making demands close attention to roads as sites of multiple, and sometimes competing, projects of territorialisation and governance. From the territorial rivalries of Nepal's two massive neighbours to Cold War and "War on Terror" strategic interests to World Bank rationalities of market integration, the pace and trajectories of road development in Nepal have been inexorably bound up with geopolitics and transnational governmentalities. These have shaped not only *where* roads are built, but also *how* they are built, both with significant implications for geographies of uneven development as well as state legitimacy and disciplinary reach. This paper builds on an extensive survey of state and donor archives to map key moments in the changing landscape of the strategic interests and rationalities of roads at work in foreign aid in Nepal, specifically in relation to the rise and apparent decline of participatory, 'green' roads approaches.

Infrastructure as Archive: Reading Colonial Road Maps for Histories of Forced Labor

Aharon de Grassi

The fixed capital of dirt roads in Africa is a product of colonial forced labor performed as taxation in kind. The infrastructure depicted in colonial road maps can be read itself as a peculiar sort of archive of processes that otherwise remain under-documented. Understanding the dynamics and extent of such unvalued, unrecorded, and unpaid labor – often rife with abuse and performed under duress in distant rural areas by women and children because of men's absence away on migrant wage work – is also key to rethinking fiscal sociologies of the state that root perceived contemporary lack of accountability in models of the historic primacy of trade rents over direct taxation of individual citizens. To address this challenge, this paper examines rural road building from 1892 to 1961 in the Province of Malanje in Angola – often problematically viewed as having a particularly disconnected state geared around slave, diamond, and offshore-oil exports – by carefully examining a series of 10 different maps of roads in conjunction with archival materials. I also compare official statistics on paid taxes with my estimated values of forced road labor contributions (based on rough calculations of the person-hours involved in construction, and the equivalent amounts in salaries). Conceptual and methodological challenges and implications include being able to more systematically assess the gap between colonial legislation and implementation, and the question of discerning actual changes on the ground distinct from cartographic changes in accuracy, categories, and classifications. There are important implications for understanding the political economy of contemporary post-colonial states, and in particular for explaining the popular affective resonance of relatively expensive mechanized construction of paved highways, often through loans or mineral resource-for-infrastructure deals.

ROUNDTABLE SESSION Geographies of infrastructure, state-making and political subjectivity III

Chair: **Dinesh Paudel**

Participants:

James Sidaway

Colin McFarlane

Elsie Lewison

Galen Murton

Katharine Rankin