

Course Title: Critical Geographies of Infrastructure Spring 2018-19

Instructor	Matt Birkinshaw
Room No.	Office 281 / Discussion Room 10131. Upper floor by courtyard in Academic Block
Office Hours	Tuesday & Thursday 11-12 – or email for an alternative time
Email	
Telephone	
Secretary/TA	
TA Office Hours	
Course URL (if any)	

Course Basics				
Credit Hours	4			
Lecture(s)	Nbr of Lec(s) Per Week	2	Duration	1 hr 50 minutes
Recitation/Lab (per week)	Nbr of Lec(s) Per Week		Duration	
Tutorial (per week)			Duration	

COURSE DESCRIPTION

In recent years, infrastructure has become a key topic of debate, across social science disciplines as well as in economic, politics and international relations. This interest in infrastructure grows out of debates on globalisation and urbanisation, increased recognition of stubborn material and technical realities and, perhaps, the increasing modesty of imagined social futures. At a city, national and regional scale, infrastructure projects – highways, ports, dams, oil pipelines and urban transport –are described as means to, and demonstration of, development and modernity. Yet, infrastructures direct material flows through space, to connect, order and rank places and the territories and networks they produce are inherently uneven. As such, infrastructures are as much social as technical projects and the social, political and economic effects of infrastructural transformations extend far beyond their engineering and technical aspects. The course aims to provide a range of tools to think through the contemporary interest in infrastructures and intervene in academic, policy and political debates.

COURSE PREREQUISITE(S)		
	Some social science background	

COURSE OBJECTIVES

The course introduces conceptual frameworks which are then used to evaluate a series of case studies across a range of infrastructural forms. Learners will be familiar with a range of influential conceptual frameworks within social science writing and will be able to use these analyse policy and academic debates on infrastructural issues.

Learning Outcomes

Students will be able to evaluate and critically synthesise a range of theoretical approaches drawing on critical geography, anthropology, and studies of science and technology. They will be able to apply these to a range of specific infrastructures in order to critique and build upon academic studies as well as evaluate the economic, political and social opportunities and challenges of infrastructure projects from a policy perspective. Learners will develop critical reading and academic writing skills through reading assignments and take-home papers. Class presentations will provide an opportunity for public speaking and team work.



Grading Breakup and Policy

Attendance & Participation: 10%

Mid-term: 20% (A short take-home paper engaging with the theoretical section of the course.)

Final-term: 45% (A take-home research paper on a topic of your choice due at the end of the semester. The paper should reflect your engagement with the texts and discussions in the class.)

Presentation: 15% (The class will be randomly divided into groups and each group will do a brief presentation on the main argument of the readings assigned. Depending on class size, each group will do 2 or 3 such presentations.)

Reading Assignment: 10% (Each student will hand in three discussion points on the readings for every session. These can be in the form of a question or comment on the reading.)

Examination	Examination Detail			
Midterm	Midterm Take home assignment of 2,000 words.			
Exam				
Final Exam	Take home assignment of 4,000 words on subject of learner's choice demonstrating understanding, synthesis and critique of relevant conceptual and empirical material. Topics may be taken from course readings or by application of core concepts to external cases.			

COURSE O	COURSE OVERVIEW					
Week/ Lecture/ Module	Topics	Recommended Readings	Objectives/ Application			
1.1 / C1	Introduction 1		Introduces the course			
1.2 / C2	Theories of infrastructure and urbanisation	Anwar, N. (2014). Infrastructure Redux: Crisis, Progress in Industrial Pakistan & Beyond. Springer. Introduction and chapter one. Brenner, N. (2013). Theses on Urbanization. Public Culture, 25(1 (69)), 85–114. Jazeel, T. (2017). Urban theory with an outside. Environment and Planning D: Society and Space, 0263775817707968. [SUPPLEMENTARY] Merrifield, A. (2013). The Urban Question under Planetary Urbanization. International Journal of Urban and Regional Research, 37(3), 909–922. https://doi.org/10.1111/j.1468-2427.2012.01189.x [SUPPLEMENTARY]	Introduces contemporary debate on urbanisation and infrastructure in Pakistan and academic writing more broadly. Demonstrates connections to earlier Marxist writings as well as links of contemporary infrastructure work to 'urban turn' in social science post 2000s.			
2.1 / C3	Space, politics and society	Lefebvre, H. (2003). <i>The Urban Revolution</i> . University of Minnesota Press. Chapter one and foreword by Neil Smith. Castells, M. (1982). 'The Wild City' in Bourne, L.S. ed., <i>Internal structure of the city: readings on urban form, growth, and policy</i> . Oxford University Press.	Important frameworks that continue to define contemporary debates. Castells synthesises Marxian perspectives on spatial development and introduces the urban scale as an important frame of analysis and political mobilisation. Lefebvre provides a			



		Castells, M. (1977). The Urban Question: a Marxist	less structuralist approach that
		approach. pp87-95, 260-275. [SUPPLEMENTARY]	connects political economy,
		dpprouch. pp67-33, 200-273. [SOFFLEMENTANT]	statehood and spatial development.
		Smith, N. (2008). <i>Uneven development: nature, capital,</i>	Smith's book is a major work in
		and the production of space. London: Verso. Forward,	
		_ · · · · · · · · · · · · · · · · · · ·	critical geography that comments
		prefaces, introduction, pp102-126. [SUPPLEMENTARY]	on and synthesizes the two
	B 11:1		positions.
	Political	Harvey, David. (1975). 'The Geography of Capitalist	Introduction to political economy
	economy 1	Accumulation: A Reconstruction of the Marxian	approach in academic geography
		Theory,' Antipode 7(2): 9-21.	through Harvey's theory of spatial
			fix and over-accumulation.
		Harvey, D. (1978). The urban process under capitalism:	Understand Harvey's theory of
		a framework for analysis. International Journal of	relationship between space,
2.2 /		Urban and Regional Research, 2(1–4), 101–131.	economy and urbanisation.
C4			Application in linking historical and
		Harvey, D. (2001). 'Globalization and the "Spatial Fix",	spatial changes in sites and sectors
		Geographische Revue, 3(2), 23-30.	of investment and decline with
			cycles of accumulation at different
		Smith, N. (2008). Uneven development: nature, capital,	scales and movements of capital.
		and the production of space. London: Verso. Pp167-	
		180. [SUPPLEMENTARY]	
	Political	Jessop, Bob. 2006. "Spatial Fixes, Temporal Fixes and	Demonstration of further
	economy 2	Spatio-Temporal Fixes," in N. Castree and D. Gregory	theoretical developments to
		(eds.), David Harvey: A Critical Reader. Malden:	Harvey's theory. Summary, critique
		Blackwell.	and extension of Harvey's theory of
			spatial fixes and application to
		Brenner, N., & Theodore, N. (2011). Cities and the	contemporary empirical material on
3.1 /		Geographies of 'Actually Existing Neoliberalism'. In N.	urbanisation and neoliberalism.
C 5		Brenner & N. Theodore (Eds.), Spaces of Neoliberalism:	Mitchell reading introduces some of
		Urban Restructuring in North America and Western	the themes from statehood and
		Europe. Wiley-Blackwell.	science and technology material.
		Mitchell, T. (2008). Rethinking economy. Geoforum,	
		39(3), 1116–1121.	
	Development	Ferguson, J. (1994). <i>The Anti-Politics Machine</i> .	Topic brings together Scotts
	and	University of Minnesota Press. Introduction, Chapter 9	concepts of 'state legibility' and
	modernisation 1	(skim Chapters two and three).	metis and Mitchell's ideas of
	modernisation 1	(Skiiii Ghapters two and three).	technocratic development agendas
3.2 /		Scott, J. C. (1998). Seeing like a state: how certain	and unintended outcomes
C6		schemes to improve the human condition have failed.	and difficulties outcomes
		New Haven: Yale University Press. Pp 11, 53-64, 72-83,	
		87-102 (and if you have time: pp22-24, 29-32, 309-	
		316).	
		310].	
	Development	Mitchell, T. (2002). Rule of Experts: Egypt, Techno-	Further work on spatial strategies
	and	Politics, Modernity. London, England: University of	and development with stronger
4.1 /	modernisation 2	California Press. Chapter one. GROUP 1	emphasis on interplay of material,
C7	modernisation Z	Camornia i ress. Chapter one. Onoor 1	physical and social factors.
			אווין אווים מווע מטכומו ומכנטומ.



	1	Lanore University of Management Scien	
		Akhter, M. (2017). Desiring the data state in the Indus Basin. <i>Transactions of the Institute of British</i> Geographers, 42(3), 377–389. GROUP 2	
		Jarosz, L. (1992). Constructing the Dark Continent: Metaphor as Geographic Representation of Africa. <i>Geografiska Annaler: Series B, Human Geography</i> , 74(2), 105–115. GROUP 3	
4.2 / C8	Statehood 1	Brenner, Neil. 2004. New State Spaces: Urban Governance and the Rescaling of Statehood. OUP Oxford. Introduction and chapter three. GROUP 4 Ferguson, J., & Gupta, A. (2002). Spatializing States: Toward an Ethnography of Neoliberal Governmentality. American Ethnologist, 29(4), 981–1002. GROUP 5	State and space. Understand links between economic, spatial and state processes in decentralisation, regionalism and investment strategies
5.1 / C9	Statehood 2	Mitchell, Timothy. 2006. 'Society, Economy and the State Effect'. In <i>The Anthropology of the State: A Reader</i> , edited by Aradhana Sharma and Gupta, Akhil, 1st ed., 169–86. Blackwell Readers in Anthropology 9. India: Blackwell Publishing. GROUP 6 Gupta, Akhil. 1995. 'Blurred Boundaries: The Discourse of Corruption, the Culture of Politics, and the Imagined State'. <i>American Ethnologist</i> 22 (2): 375–402. GROUP 7 Abrams, Philip. 2006. 'Notes on the Difficulty of Studying the State'. In <i>The Anthropology of the State: A Reader</i> , edited by Aradhana Sharma and Akhil Gupta, 1 edition, 112–30. Wiley Blackwell Readers in Anthropology. Malden, MA; Oxford: Wiley-Blackwell. GROUP 8	Further application of ethnographic approaches to state. Understand Foucauldian and performativity ideas of statehood as 'produced', imagined, effect, etc. Application of this to discourse of corruption – theme which recurs in weeks 6, 8, 9, 13.
5.2 / C10	Science and technology 1	Langdon Winner. (1980). Do Artifacts Have Politics? Daedalus, 109(1), 121–136. GROUP 9 Bijker, W. E., Hughes, T. P., & Pinch, T. J. (1987). The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology. MIT Press. Introduction and chapter three, Callon. GROUP 10 Edgerton, D. (1999). From innovation to use: Ten eclectic theses on the historiography of technology. History and Technology. https://doi.org/10.1080/07341519908581961. GROUP 11	Move beyond work on political economy and statehood to role of technologies themselves. This approach continues to be a major influence in contemporary research on infrastructure. Pieces introduce debates on relationship between technology, politics and society.
6.1 / C11	Science and technology 2	Haraway, D. (2016). A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late	Problematises role of science through feminist and postcolonial
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		Landre University of Wanagement Selen	
		Twentieth Century. In Simians, Cyborgs, and Women: The Reinvention of Nature. Routledge.	perspectives. Introduces concept of (urban) metabolism.
		Prakash, G. (1999). Another Reason: Science and the Imagination of Modern India. Princeton, N.J: Princeton University Press. Chapter six. GROUP 13	
		Gandy, M. (2005). Cyborg Urbanization: Complexity and Monstrosity in the Contemporary City. International Journal of Urban and Regional Research, 29(1). GROUP 12 [SUPPLEMENTARY]	
	Postcolonialism 1	Ahuja, R. (2009). <i>Pathways of Empire</i> (First edition). Hyderabad: Orient BlackSwan. Chapters one and three. GROUP 14	Historical studies of the influence of colonial infrastructure development
6.2 / C12		Kooy, M., & Bakker, K. (2015). (Post)Colonial Pipes: Urban Water Supply in Colonial and Contemporary Jakarta. In F. Columbijn & J. Cote (Eds.), <i>Cars, Conduits, and Kampongs: The Modernization of the Indonesian City, 1920-1960</i> (pp. 63–86). Brill. GROUP 15	
		Kale, S. S. (2014). Structures of Power: Electrification in Colonial India. <i>Comparative Studies of South Asia, Africa and the Middle East</i> , 34(3), 454–475. https://doi.org/10.1215/1089201X-2826037. GROUP 16	
	Postcolonialism 2	Roy, A. (2009). The 21st-Century Metropolis: New Geographies of Theory. <i>Regional Studies</i> , 43(6), 819–830. GROUP 17	Contemporary applications of postcolonial theory to spatial questions
7.1 / C13		Robinson, J. (2003). Postcolonialising Geography: Tactics and Pitfalls. <i>Singapore Journal of Tropical Geography</i> , 24(3), 273–289. GROUP 18	
		Jazeel, T. (2014). Subaltern geographies: Geographical knowledge and postcolonial strategy. <i>Singapore Journal of Tropical Geography</i> , 35(1), 88–103. GROUP 19	
7.2 / C14	What is infrastructure? Macro approaches	Graham, S., & Marvin, S. (2001). Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition. Routledge. Introduction [GROUP 1, 6, 11, 16], chapters two [GROUP 2, 7, 12, 17], three [GROUP 3, 8, 13, 18], five [GROUP 4, 9, 14, 19]	Introduces agenda setting and widely read work on infrastructure and critiques. Easterling provides an overview of contemporary relevance of concept moving towards wider understanding in part 2
		Coutard, O. (2008). Placing splintering urbanism: Introduction. <i>Geoforum</i> , <i>39</i> (6), 1815–1820. [GROUP 5, 10, 15]	P



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		Lanore University of Management Scien	
		and Regional Research, 32(2), 392–414. [SUPPLEMENTARY]	
10.2 / C18	Urban water	Coelho, K. (2006). Tapping In: Leaky Sovereignties and Engineered (Dis)Order in an Urban Water System. <i>Sarai Reader 2006: Turbulence</i> , 497–509. Ranganathan, M. (2014). 'Mafias' in the Waterscape: Urban Informality and Everyday Public Authority in Bangalore. <i>Water Alternatives</i> , 7(1). Loftus, A. (2006). Reification and the Dictatorship of the Water Meter. <i>Antipode</i> , 38(5), 1023–1045. [SUPPLEMENTARY]	Papers introduce influential approaches to statehood, commercialisation and technology in urban water
11.1 /C19	Ports	Bear, L. (2015). Capitalist divination: popularist-speculators and technologies of imagination on the Hooghly River. <i>Comparative Studies of South Asia, Africa and the Middle East, 35</i> (3), 408–423. Carse, A. (2012). Nature as infrastructure: Making and managing the Panama Canal watershed. Social Studies of Science, 42(4), 539–563. Karaliotas, L. (2017). Performing neoliberalization through urban infrastructure: Twenty years of privatization policies around Thessaloniki's port. <i>Environment and Planning A: Economy and Space, 49</i> (7), 1556–1574. [SUPPLEMENTARY]	Papers use ports as lens on economic, state and environmental strategies
11.2 / C20	Roads	Khan, N. (2006). Flaws in the Flow: Roads and their modernity in Pakistan. <i>Social Text</i> , <i>24</i> (4 (89)), 87–113. Dalakoglou, D., & Harvey, P. (2012). Roads and Anthropology: Ethnographic Perspectives on Space, Time and (Im)Mobility. <i>Mobilities</i> , <i>7</i> (4), 459–465. Anwar, N. H. (2016). Asian mobilities and state governance at the geographic margins: Geopolitics and oil tales from Karachi to Taftan. <i>Environment and Planning A: Economy and Space</i> , <i>48</i> (6), 1047–1063. [SUPPLEMENTARY] Harvey, P. and Knox, H. (2015). <i>Roads: An Anthropology of Infrastructure and Expertise</i> . Ithaca; London: Cornell University Press. Introduction and conclusion. [SUPPLEMENTARY]	Articles provide opportunity to apply work on modernisation, economy, statehood and expertise.
12.1 / C21	Oil	Harvey, David. 2004. "The 'New' Imperialism: Accumulation by Dispossession." Socialist Register	Highlights global and national level spatial politics of energy



	ı	Landic University of Management Scien	
		40: 63-87. Ferguson, J. (2005). Seeing Like an Oil Company: Space, Security, and Global Capital in Neoliberal Africa. American Anthropologist, 107(3), 377–382.	infrastructures, particularly oil. Introduces accumulation by dispossession – used in range of work on infrastructure.
12.2 / C22	Coal and gas	Mitchell, T. (2009). Carbon democracy. Economy and Society, 38(3), 399–432. Barry, A. (2013). Material Politics: Disputes Along the Pipeline (1 edition). Chichester, West Sussex: Wiley-Blackwell. Chapter seven.	Builds on previous session with greater emphasis on materialities approaches and historical context.
13.1 / C23	Cities	Sassen, Saskia. 2000. "The Global City: Strategic Site/New Frontier." American Studies 41(2/3): 79-95. Robinson, Jennifer. 2002. "Global and World Cities: A View from Off the Map." International Journal of Urban & Regional Research Torrance, M. (2009). Reconceptualizing urban governance through a new paradigm for urban infrastructure networks. Journal of Economic Geography, 9(6), 805–822. [SUPPLEMENTARY]	Cities not only require infrastructure but are themselves a key social, political and economic infrastructure. The global cities debates consider the effects of the functions and perceptions of urban spaces as key nodes in an international system. Torrance refines this work further by demonstrating how contemporary infrastructural governance questions the notion of urban scale.
13.2 / C24	Data	Amoore, L. (2006). Biometric borders: Governing mobilities in the war on terror. Political Geography, 25(May 2005), 336–351. https://doi.org/10.1016/j.polgeo.2006.02.001 Amoore, L. (2009). Algorithmic War: Everyday Geographies of the War on Terror. Antipode, 41(1), 49–69. https://doi.org/10.1111/j.1467-8330.2008.00655.x Hollands, R. G. (2008). Will the real smart city please stand up?: Intelligent, progressive or entrepreneurial? City, 12(3), 303–320. https://doi.org/10.1080/13604810802479126 [SUPPLEMENTARY] McFarlane, C., & Söderström, O. (2017). On alternative smart cities. City, 21(3–4), 312–328. https://doi.org/10.1080/13604813.2017.1327166 [SUPPLEMENTARY]	The increasing power and use of digital technology increasingly requires data and digital infrastructures to be understood as an additional structure operating with and often enabling older forms such as borders, ports, urban planning and services. These articles present two themes from this emerging field.
14.1 / C25	People	Simone, A. M. (2004). People as Infrastructure: Intersecting Fragments in Johannesburg. <i>Public Culture</i> , <i>16</i> (3), 407–429.	Infrastructures can be understood as reified social relations, however in many contexts they are as much social as material / technological.



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		Larner, W., & Laurie, N. (2010). Travelling technocrats,	This theme questions the balance
		embodied knowledges: Globalising privatisation in	between the social and technical,
		telecoms and water. <i>Geoforum</i> , 41(2), 218–226.	both in the context of the global and European 'south' as well as the
		Blok, A. (1969). Peasants, Patrons, and Brokers in	worlds of management consultants.
		Western Sicily. Anthropological Quarterly, 42(3), 155–	
		170. [SUPPLEMENTARY]	
		Prince, R. (2012). Policy transfer, consultants and the	
		geographies of governance. <i>Progress in Human</i>	
		Geography, 36(2), 188–203. [SUPPLEMENTARY]	
		Geography, 30(2), 166–203. [30FFLLWLWTAKT]	
		Film: Katiyabaaz	Session will present an opportunity
			to reflect on the course so far and
14.2	Roundup		discuss final papers. The film
			illustrates many aspects of
			infrastructure covered.

Textbook(s)/Supplementary Readings

Amoore, L. (2018). Cloud geographies: Computing, data, sovereignty. Progress in Human Geography, 42(1), 4–24. https://doi.org/10.1177/0309132516662147

Boelens, R., Hoogesteger, J., Swyngedouw, E., Vos, J., & Wester, P. (2016). Hydrosocial territories: a political ecology perspective. Water International, 41(1), 1–14. https://doi.org/10.1080/02508060.2016.1134898

Brenner, N. (1998). Global cities, glocal states: global city formation and state territorial restructuring in contemporary Europe. Review of International Political Economy, 5(1), 1–37.

Campbell, J. M. (2012). Between the Material and the Figural Road: The Incompleteness of Colonial Geographies in Amazonia. Mobilities, 7(4), 481–500.

Campling, L., & Colás, A. (2017). Capitalism and the sea: Sovereignty, territory and appropriation in the global ocean. Environment and Planning D: Society and Space, 0263775817737319.

Cook, I. M. (2015). Link Work: Land and Housing Brokers in Mangaluru, India. Journal of South Asian Development, 10, 292–317.

Dalakoglou Dimitris. (2010). The road: An ethnography of the Albanian–Greek cross-border motorway. American Ethnologist, 37(1), 132–149.

Desai, A. (2015). Of Faustian Pacts and Mega-projects: The Politics and Economics of the Port Expansion in the South Basin of Durban, South Africa. Capitalism Nature Socialism, 26(1), 18–34.

Dikeç, M. (2012). Space as a mode of political thinking. *Geoforum*, 43(4), 669–676. https://doi.org/10.1016/j.geoforum.2012.01.008



Frenkel, S. (2002). Geographical representations of the «Other»: the landscape of the Panama Canal Zone. Journal of Historical Geography, 28(1), 85–99.

Kernaghan, R. (2012). Furrows and Walls, or the Legal Topography of a Frontier Road in Peru. Mobilities, 7(4), 501–520.

Latour, B. (1996). Aramis, or the Love of Technology. Harvard University Press. Chapter 1

Latour, B., & Hermant, E. (2004). Paris: invisible city. Retrieved from www.bruno-latour.fr/virtual/EN/index.html

Lawhon, M., Ernstson, H., & Silver, J. (2014). Provincializing Urban Political Ecology: Towards a Situated UPE Through African Urbanism. Antipode, 46(2), 497–516. https://doi.org/10.1111/anti.12051

Loftus, A. (n.d.). Rethinking Political Ecologies of Water, 30(5), 953-968. https://doi.org/10.1080/01436590902959198

Mann, M. (2007). Delhi's Belly On the Management of Water, Sewage and Excreta in a Changing Urban Environment during the Nineteenth Century. Studies in History, 23(1), 1–31. https://doi.org/10.1177/025764300602300101

Manor, J. (2000). Small-Time Political Fixers in India's States: 'Towel over Armpit'. Asian Survey, 40(5), 816–835.

Mol, A. (2002). The Body Multiple: Ontology in Medical Practice. Duke University Press. Chapter 1

Peck, J., Theodore, N., & Brenner, N. (2009). Neoliberal Urbanism: Models, Moments, Mutations. SAIS Review of International Affairs, 29(1), 49–66.