

This dissertation is submitted as an Independent Geographical Study as a part of a BA degree in Geography at King's College London.

Cover picture: The Crane Driver, by Ken Currie (1987)

KING'S COLLEGE LONDON UNIVERSITY OF LONDON

DEPARTMENT OF GEOGRAPHY

INDEPENDENT GEOGRAPHICAL STUDY

I, Nicolas Szende, hereby declare (a) that this dissertation is my own original work and that all source material used is acknowledged therein; (b) that it has been specially prepared for a degree of King's College London; and (c) that it does not contain any material that has been or will be submitted to the Examiners of this or any other university, or any material that has been or will be submitted for any other examination.

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Abstract

This project is structured around one particular example (construction cranes), that serves as the underpinning of a new ontological consideration of urban infrastructure and socio-technical regimes (schizogeography), one that does not shy away from the molecular politics of desire that shape the production of the urban.

Exploring, through public art and a diversity of visual discourses, the schizogeographic takes on affectivity, performance and the 'aparallel evolution' of bodies and structures, sheds a light on the alternative relational ontologies of urban neoliberal infrastructure.

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List of Abbreviations

AO Anti-Oedipus (Deleuze and Guattari, 1977)

CGI Computer-generated image

TP A Thousand Plateaus (Deleuze and

Guattari, 1987)

Urban Exploration

Introduction

crane1

Noun. A large, tall machine used for moving heavy objects by suspending them from a projecting arm or beam.

crane²

Noun. A tall, long-legged, long-necked bird, typically with white or grey plumage and often with tail plumes and patches of bare red skin on the head. Cranes are noted for their elaborate courtship dances.

Oxford Dictionary of English (Stevenson, 2010: 406)

One look above the horizon and they are visible, in a constant and never-ending parasitic colonisation of most Global-City-skylines. Not that they are necessarily being paid much attention: skeletal shadows by daytime, frail beacons at twilight, construction cranes are *a priori* doomed to a cosy stay in the collective unconscious of citizens. The trace they leave - a 'retinal afterglow' – belongs to the realm of infrastructure: a "soupy matrix of details and repeatable formulas" (Easterling, 2014:11), which is characterised by its capacity to thrive unnoticed, but extends further than a static photography of the urban form. The 'infrastructural turn' in interpretive social sciences has indeed, over the last 20 years, emphasised the need to consider more seriously the material pipework and the technologies of circulation – circulation of data, circulation of matter – that are attached to, and have had agency over debates around urban unequal development (Graham and Marvin, 2001; Gandy, 2006), and postcolonial powers (Roy, 2007, McFarlane, 2011).

This study is not about cranes as a *piece* of infrastructure. It rejects the premise that a tool (*techne*), a mechanism, or a network should be granted ontological independence: in the same way that Marx tied the *base* and *superstructure* of capitalist relations of production as a totality in his material dialectics (2010), it draws influence from the 'infrastructural turn' scholars, who highlighted the *relational* nature of sociomaterial processes. The concept of assemblage, derived from Deleuze and Guattari's *Capitalism and Schizophrenia* (*Anti-Oedipus*, 1977 [1972]; *A Thousand Plateaus*, 1987 [1980]) and defined by infrastructure geographers as

a relational process of composition [which] signals the emergence, labour and sociomateriality of the city, and the ways in which this process becomes structured and hierarchical through inequalities of power, resource and knowledge (McFarlane, 2011:221)

opened up epistemic imaginaries towards more-than-human thinking and, more generally, was used to break apparent 'ontological apartheids' between bodies and things, nature and culture, objects and their representation (Anderson *et al.*, 2012).

The assemblage literature has nevertheless reached a status quo. Despite being more productive than ever, it is caught in an conceptual maelstrom with the actor-network theory and its terminology (Farias, 2009; Müller and Schurr, 2016): a harmful confusion that harnesses the latter theory to inevitably impose its depoliticised formulas and managerial legacies onto the former – especially when the focus is put on construction sites (Harty, 2008). Turning back to the work of Deleuze and Guattari and considering *it* as an assemblage of concepts that only makes sense inasmuch as its main purpose was to provide a Marxian critique of Freudian psychoanalysis, and the explanations of social behaviour that came with it, is the main theoretical argument of my study. **Schizogeography**, as a term, is the projection of this totality onto geographical topics, and its use supplements the second target of this IGS: a new ontological consideration of construction infrastructure that relies on the continuity between the *sensible* and the *intelligible*, the plane of immanence on which the material and spiritual realities of the 'becoming-built' are situated.

This work examines construction cranes as a process and a lens through which different snapshots of the 21st century 'Global City' urban infrastructural life can be taken in order to answer the following question:

How are the 'craned' urban infrastructural imaginaries constructed, performed and contested?

Chapter 1 establishes the conceptual bases of schizogeography and applies it to debates on urban infrastructure and the process of generating infrastructure. Chapter 2 investigates the production of construction infrastructure managerial discourses, with a particular emphasis on cranes as the theatre of 'machinic wonders' and as another "Dreamworld of Neoliberalism" (Davis and Monk, 2013). Chapter 3 then sheds a light on the sociotechnical complexity of the construction site in public art – or the construction site *as* art – by focusing on contemporary interpretations and imaginaries of the 'craned' urban landscape. Finally, Chapter 4 considers the schizogeographies of climbing the construction site, both as a subversive practice and as a dissension.

Chapter 1

Infrastructural schizogeographies: organisation and transgressions

Manifesto for an urban schizogeography

The drive to "burst things asunder" (Massumi, 1992:147), ever so central to poststructuralist thought, is materialised in Deleuze and Guattari's lexicon as the *schiz*- of schizoanalysis. Drawing from the figure of schizophrenia and its tendency to escape the conceptual straitjackets imposed by psychoanalysis, they locate the schizophrenic patient as "somewhere else, beyond or behind or below" (AO:23) psychoanalytic approaches of the self. Indeed, these are meant to systematically fit into the Oedipal triangle, and depend on its stable ontological coordinates – "daddy, mommy and me" (AO:101). Like any coordinates, the Oedipal ones depend on institutionalised, moral "apparatuses of capture" (TP:424) of the body, and schizoanalysis extends this idea to the coordinates that are set by the instrumentation of capital (Purcell, 2013).

Explaining schizogeography is no different from explaining schizoanalysis, since it deals with the structuring and dissemination of power in capitalist times; schizogeography is only a semantic return to the conceptual consistency of *Capitalism and Schizophrenia*. It does not consider urban assemblages as a 'theory' (DeLanda, 2006, 2016; Normark, 2009; Schoepfer and Paisiou, 2015) since this formulation merely yields truncated conceptions of cultural and infrastructural landscapes. The assemblage should not even be considered as a metaphor, but rather as an epistemic tool that reflects the versatile nature of the expansion of capital over physical and representational space (TP).

Schizogeography is the molecular politics of desire

Desire does not emerge, in schizoanalysis, out of 'a lack', and is not seen as a negative intensity (*i.e.* a unit of castration, insufficiency – "an inability-to-be that is life itself" (AO:26)). 'Desiring-production', in Deleuzian terms, is a conceptualisation of desire as a graspable entity, and of the accumulative processes through which desire *itself* is constructed:

the only means of bypassing the sterile parallelism where we flounder between Freud and Marx [is] by discovering how social production and relations of production are an institution of desire, and how affects or drives form part of the infrastructure itself. For *they are part of it, they are present there in every way* while creating within economic forms their own repression, as well as the means for breaking this repression (AO:63)

This desire is the labour of Marxian political economies: a ubiquitous, productive force, effectuated through action (Marx, 2008) and realised in delimited sites: desiring-machines¹. Connected in a *rhizomatic* manner (Figure 1), desiring-machines operate at a *molecular* scale and 'inhabit' *molar* aggregates, that carry an organic, technical or social nature and are themselves rhizomatically arranged – a world of 'ponds within ponds' (Law, 2004). Schizogeography is oriented towards elucidating the spatial nature of these two theoretical formations of desire, which however are not to be mistaken with global/local or individual/collective dichotomies (TP:219). Inspired by Gabriel Tarde's microsociology – that broke these oppositions by treating societies as "open ensembles of immanent and partial relationships of collective beliefs and desires" (Tonkonoff, 2013:267) – desiring-machines rely on both the molar scattering of personal and collective flows of social representations, stratifications and beliefs, and their molecular analogues: transient twists, dissenting events, "rarefied divisions" that destabilise the perception of molar phenomena. The molecular not only challenges the molar, "pulverises the world", but also "spiritualises its dust" (Deleuze, 1993:87): it redirects the social scientist's gaze away from the stable, towards the fleeting.

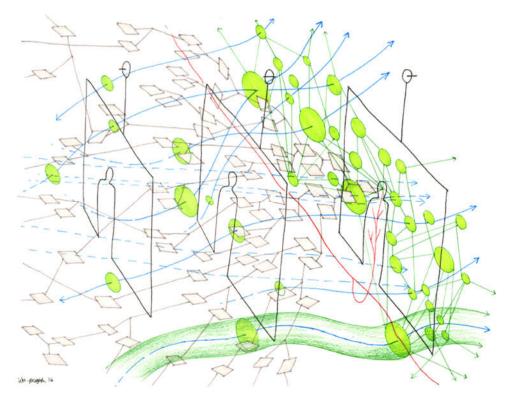


Figure 1 – "Schizoanaysis [...] treats the unconscious as an acentered system, in other words, as a machinic network of finite automata (a rhizome)" (TP:18) (Illustration by Ngui, 2016)

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¹ 'Desiring-machines' and 'assemblages' are one and the same concept. While the latter was preferred over the former in *a Thousand Plateaus* - notably due to confusions between desire and sexuality that were noticed in the readership of the *Anti-Oedipus* (Deleuze and Parnet, 1987) – nowadays, a greater conceptual contention revolves around the term 'assemblage'.

Schizogeography is the pragmatics of space

Desiring-machines are ontologically contingent. Capturing the "postures, attitudes, perceptions, expectations, semiotic systems" that come with them (TP:215) – in other words signs that are fixed in time, bodies, space and matter – is a practice through which the transitory nature of molar geographical concepts like the 'urban' or 'nature' can be grasped. Drawing from Deleuze and Guattari's work on linguistics, the root of this process is the consideration that there is "no sense in space before the sense that signifies" (Serres, in Schlottman *et al.*, 2010:231): what is negotiated over space is not only meanings, but also epistemologies, and *pragmatics* is the branch of semiotics that will consider the contextual construction of 'meaning'. The conjunction "and... and... and" (TP:25), is what here forms the signifier: the urban <u>is</u> the city <u>and</u> its buildings <u>and</u> spaces of resistance <u>and</u> bodies alienated by capital <u>and</u> competitive growth clusters <u>and</u> so on.

More-than-representational geographies have, over the last 20 years, imported pragmatic thinking to critical geography (Lorimer, 2005) and envisioned the infinite connections that subjectivity and corporeality make before the effort of representation is taken. Whilst they have been criticised for their ethnocentrism due to the alleged obstructive effect their universalist considerations have over unequal power relations (Tolia-Kelly, 2006; Simpson, 2017), I suggest that the plurality and multiplicity they are associated with can also be part of a wider Marxian consideration of space.

Schizogeography is a geography of hybridisation

A becoming is always in the middle; one can only get it by the middle. A becoming is neither one nor two, nor the relation of the two; it is the in-between (TP:293)

The idea of 'becoming' in schizoanalysis is more fundamental than the 'being' itself. One could say that there is no 'building' or 'construction site' or 'tool', only desiring-machines, constantly forming and deforming, evolving under the labile state of becoming-building, becoming-construction site or becoming-tool. Pragmatics teach us that, for instance, in urban environments, becoming-entities and their representation are delineated in space, or territorialized, by apparatuses that capture signification – the state, development discourses, the New Urban Governance... Territorialization, however, never operates on its own. Capital functions in space through mechanisms of deterritorialization, as in the social, physical and semantic uprooting of cultures, communities, bodies (Appadurai, 1996), and the

reterritorialization, re-scaling, 'structural adjustment' of the former (Brenner, 1999). These two processes co-operate simultaneously: a given spatial entity does not follow 'deterritorialization-THEN-reterritorialization' genealogies, but is polyvocally fed by both mechanisms, yielding hybrid becoming-places or becoming-objects that are essential to, and act upon, the contradictory processes of capital accumulation (Harvey, 2014).

Urban infrastructure and dividuals: splintering schizogeographies

The core aim of critical infrastructure studies has been to challenge the assumption that technologies, utilities and all the other material elements that are part of what is widely considered as infrastructure are not *neutral* (Curry, 1998). It is perhaps the emergence and the dissemination of Internet networks at the turn of the twenty-first century that best demonstrated the political and social power that such elements can bear in neoliberal times, and inspired Deleuze's interpretation of Foucault's work on capitalist disciplinary societies. "Societies of control" are – according to him – a contemporary version of these, where government subjects and objects are no longer produced and regulated through straightforward, territorialising dynamics of "enclosure" but rather through a networked scattering of power (Deleuze, 1992).

The family, the school, the army, the factory are no longer the distinct analogical spaces that converge towards the owner – state or private power – but coded figures – deformable and transformable (Deleuze, 1992:6)

It is through these networked connections, Graham and Marvin argue in *Splintering Urbanism* (2001), that it is possible to observe the contradictory nature of neoliberal infrastructure. The "splintering" metropolis is one where space is produced, on the one hand, through the making of "premium networked spaces" – skywalks, media conglomerates, gated enclaves, airport terminals and so on – tailored to bypass the major part of the population while satisfying the wants, needs and desires of the urban elites (Figure 2). On the flip side, the critical aspects of infrastructural life are "unbundled", socially segmented to the extent that for popular classes, even access to basic utilities or transport connections can be put into jeopardy (*Ibid*.). The dangers of splintering urbanism have been put at the centre of attention through stories like the ongoing water crisis in Flint, Michigan, where the regional failure of water treatment infrastructure combined with the active neglect of the poorest citizens of the city led to disastrous – racially and socially aggravated – effects like epidemic levels of lead poisoning and waterborne diseases (Mohai, 2018). The *matter* of this scandal however gets its complexity from

the interdependencies between the networks of political control and the corporeal and material elements of this failure:

life-forming matter [of water contamination] in the literal sense is the hyper-surveyed (debt collection and scientific evidence of pipe erosion) or intentionally unsurveyed vector of potential risk (denial of inadequate billing practices and ignoring residential complaints of toxic water) (Grimmer, 2017:20)

The traditional prism of biological and material control is indeed no longer sufficient in a neoliberal political economy of infrastructure that depends on the computable, the programmable. Deleuze's concept of the "dividual" (1992) bursts the 'individual' into facets that can be translated into data – debt, *transferrable skills*, social credit, are all 'actually existing' dividual aspects that make human beings more legible to apparatuses of control and surveillance. It is, by taking the example of the most immiserated Johannesburg dwellers, whose identities are often minimalized to these facets, that Simone coined the phrase "people as infrastructure" (2004). The *infra*- relates for him to the hidden and degraded bodies of subaltern relations of production and the *-structure* the molecular informal networks that emerge out of this dis-integrated (literally when the individual loses integrity) condition (*Ibid.*).



Figure 2 – Dubai's tram line on its opening day, "enticing would-be riders with air-conditioned stations and a premium section on its sleek cars for big-spending commuters", also offers connections with the metropolis' largest skyscrapers without ever stepping foot outside (Jebrelli, 2014)

Whither the becoming-built?

Considering the urban as a process and not as an ontologically static, spatially grounded object of research has become, since Lefebvre's *Production of Space* (1991 [1974]), which was seminal in the works of Smith (1990) and Whatmore (2002), a common trope that gained the status of *a priori* assumption for critical urban geographers. The idea that the built environment is in a constant state of 'becoming' is consistent with a schizogeographic conception of the urban – built space keeps on being performed through representations and everyday practices even after it is physically 'achieved'. Paradoxically enough, the 'explicitly becoming-built' construction site – arguably the most visibly produced side of urban life – has escaped these considerations in the literature.

On the one hand, the field of organisational culture, usually associated with management studies, has produced sociological accounts of work in the construction site: through the study of organisational traits like the binaries between "adhocracy" and "hierarchy", or between "internal focus" and "external focus" (Thomas *et al.*, 2002), these evaluated the cohesiveness of the worker-manager or worker-worker relationships in order to assess how 'competitive' modes of productions in the industry are in relation to the social layering of the construction site (Koskela, 1992).

Another branch of organisational sociology, project management, has increasingly relied on relational and sociotechnical thinking when it came to deciphering construction sites, mostly due to the influence of Bruno Latour's actor-network theory (1996) as a project planning model (Boelens, 2010; Rydin, 2012). Explicitly influenced from *Capitalism and Schizophrenia*, it 'rationalises' the foundations of schizoanalysis by projecting them onto existing elements of graph theory and modelling.

[Actor-network theory] has been developed by students of science and technology, and its claim is that it is utterly impossible to understand what holds society together without reinjecting in its fabric the facts manufactured by natural and social sciences and the artefacts designed by engineers (Latour, 1996:370)

Accordingly, it is no surprise that an 'engineered' conception of the urban – and in this case, of the urban building sector – is centred on the role of the architect, the expert, the manager, as Figure 3 (Rydin, 2012), which graphically details the process behind planning consent in a commercial development in Central London, shows. While it emphasises the need to consider "energy generating technologies" and electric flows as important actors of the process, the numeric forefront of these graphs prioritises 'traditional' managerial stakeholders in the

construction and planning industries – no mention of the construction workers or the architectural form and aesthetics of the potential buildings is made.

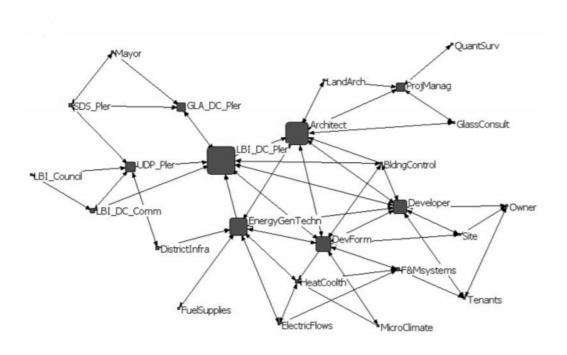


Figure 3 – A "network of all actants in commercial office development in Ropemaker Place. Nodes weighted by betweenness score for actants" (Rydin, 2012:35)

On the other hand, works like Datta and Brickell's study of the production of identity in Eastern European construction workers in London (2009), or Mohammad and Sidaway's insight into the 'spectacle' economy of Doha and the role that the construction industry plays in its formation (2016), have sought to make the building site visible as a machine of social production. In both studies, the transformative journey that lived and represented space undergo is influenced by social stratification in the workplace: it is the norms, expectations and values of workers that make the sociotechnical *whole* of the construction site – its "habitus" (Bourdieu, 1977). Nonetheless, it is also the material and spatial layout of the site that acts as a chamber of reflection, absorbing and catalysing the molar and molecular flows of urban capital. The becoming-construction site should be considered as an actively splintering desiring-machine that concentrates in its physical form 'people as infrastructure', certain ideals and promises, but also potential failure:

Whether they are being built or crumbling, infrastructures simultaneously index the achievements and limits, expectations and failures, of modernity. We inhabit worlds already formed by differentiated infrastructures, making them good to think with in the classic ethnographic sense. (Anand *et al.*, 2018:26)

Research design

We have seen how the splintering of infrastructure goes through material ordering, or organisation, but this organisation bears a deeply transgressive nature: moral boundaries and physical walls keep on being transgressed, deterritorialised. Conceptualising building infrastructure as the focus of ethnographic attention, as Anand *et al.* (2018) argue, is a tool that will enable us to re-politicise the existing methodologies of organisational studies by introducing them to the aforementioned tensions, that critical infrastructure scholars have highlighted – when they in turn do not necessarily deal with material agency. The methodology I suggest is therefore *object-oriented* (Harman, 2002), and involves all bases of schizogeography: since infrastructure itself is productive and fully part of the desiring-production, the 'objects' or the 'tools' that compose it cannot be reduced to their material properties, or as "a derivation or reflection of power, but as a source and force" (Meehan, 2014:217). Taking model from Meehan's framing of water infrastructure as "wellsprings" of power (*Ibid.*), my approach considers the crane as a "force-full" tool that is not only part of the urban spectacle, but also *performs* the urban.

This study is a '3D' material ethnographic work around cranes, and the use of visual methods, through the analysis of photographic and filmic data as well as of discourses and urban art installations, in the following chapters, responds to the need to semiotically read the morphology of the 'crane process'. Their distinctive dimensions inevitably challenge any attempts to make them fit into 'flat' ontologies of the production of space – and their material characteristics enable us to fit them into a topological, "volumetric", conception of urbanism (Harris, 2015). Beyond the – although very important – equation that correlates vertical landscapes with power, command and masculinity (Graham, 2016), visual engagement with high-rise urbanism cannot be limited to observing the vertical as a uniform phenomenon, "above the horizontal plane", as Harris notices:

By understanding urban verticality as the provisional achievement of (horizontal and vertical) entanglements of people, systems, rules, practices, technologies and things, some of the Cartesian framing of the vertical against the horizontal can be breached and broadened (Harris, 2015:612)

Jane M. Jacobs' broader understanding of neoliberal urban infrastructure as a "geography of big things" (2006) can perhaps help us avoid confirmation biases and other self-fulfilling prophecies linked to vertical determinisms. The 'big thing' can also be seen as a schizogeographic entity, brought to life by the entanglements between conceptions of 'tall-ness', 'large-ness' – a

"megamachine" (Guattari, 2015) immanent to its condition as an "occupied performative event" (Jacobs, 2006:10).

There are also, however, limitations to visual semiotic methods regarding the infrastructural 'big thing'. A photographic or documentary discourse-based approach tends to be oriented towards "detailed readings of individual images, [which] raises questions about the representativeness and replicability of its analyses", as Rose claims (2001:97), and this is why, she adds, reflexivity is much needed in order to acknowledge the researcher's own choices and interpretations, since these approaches are *about* deconstructing 'meaning' and interpretation mechanisms. With this in mind, "another problem with discourse analysis [...] is its refusal to ascribe causality." (*Ibid.*, p.162). The multiplicity of sources and visual codes could indeed push the researcher to lean towards complexity biases – truly the thought that rhizomatic urban systems could be reduced to their 'a-centred' nature, lest we forget that rhizomatics are themselves developed by and through the pliability of neoliberal apparatuses (TP).



Figure 4 - Conduct of conduct(s) (Author's photo, West London, 2018)

Chapter 2

Construction governances: assembling the 'anti-gravitational hubris'

The material infrastructure, communications and services of cities cannot be separated from functions that may be described as existential. Megamachines model sensibility, intelligence, inter-relational styles, and even unconscious phantasms. (Guattari, 2015: 105)

Building material imaginaries

There is a flipside to Simone's concept of "people as infrastructure" (2004) in urban environments, and it is located in the role of gentrifiers, developers, and architects as infrastructures of segregation – a modern version of what Lefebvre qualified as the "Olympians of the new bourgeois aristocracy [who] no longer inhabit" (1996:159). The distinction made between those who 'inhabit' and the rest can be understood as a material one – there is a socioeconomic class that benefits from the 'creative destruction' of environments, communities, vital infrastructure, while systematically renewing the urban form according to their *wants, needs and desires* (Harvey, 2016). In practice, Zukin's *Loft Living* (1982) demonstrates the emergence, in the New York of the 1970s, of former industrial spaces as a housing market for the bohemian bourgeoisie – or in other words the mutation of light manufacturing centres into spaces of consumption – where the "loftiness" of a residential space was determined by its capacity to serve as a site of urban performance, of "drama in everyday life" (*Ibid.*, p.2).



Figure 5 - "Beauty in the eye of the gasholder": luxury flats in King's Cross, London (Plowman Craven, 2018)

The "aesthetic component to the demand factor" (Zukin, 1982:14) inevitably plays a part when it comes to understanding how and why lofts – and subsequently other types of housing which played with the 'derelict' condition of post-industrial urban space – have sat at the forefront of this desiring-production. For Balaisis (2014), the charm of industrial aesthetics lies in the 'grit' of its obsolescence – an image associated with a romanticised sense of manufacturing, tradition, perhaps motivated by nostalgia, or a certain moral argument that associates the (formerly) working class environments with an ideologically desirable "backdrop for lives conducted at a remove from its multicultural institutions" (Butler and Robson, 2001:2157). Both Figures 5 and 6 illustrate the extent of such phenomena nowadays: the endeavours of those who wanted to preserve the King's Cross gasholders and the Battersea cranes as 'heritage highlights' justified, in both cases, their dismantlement, transplantation and refurbishment.



Figure 6 – CGI of the 'refurbished' Battersea cranes (Simpson Haugh and Partners, 2014)

Moving on to future conceptions of industry in the Global North, it seems like the same obsessions with redefining the material reality of cities as an infrastructure that satisfies particular wants, needs, and desires are repeated, this time through the figure of 'human-free production':

The construction site of 2050 will be human-free. Robots will work in teams to build complex structures using dynamic new materials. Elements of the build will self-assemble. Drones flying overhead will scan the site constantly, inspecting the work and using the data collected to predict

and solve problems before they arise, sending instructions to robotic cranes and diggers and automated builders with no need for human involvement. (Balfour Beatty, 2017:3)

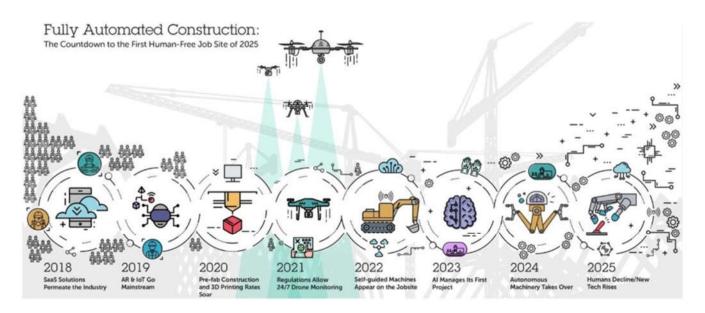


Figure 7 - "The countdown to human-free construction is less than 10 years away" (Construction Links Network, 2018)

The iconography and vocabulary of the 'ideal' construction site according to managers is highly reminiscent of what Davis and Monk qualify as a "dreamworld of neoliberalism" (2013) – where machines unlock faster, taller, more "gigantic" imaginaries of the becoming-built – a perhaps conceivable but definitely outlandish fascination for 'the architectural record books'. Such postwork futures are in reality the material continuation of the Marxian contradiction between technological progress and human disposability, as Harvey notices (2014), a mean cycle that solves the shortage of skills by "further bouts of deskilling [...] ever increasing social inequalities and environmental degradation" (*Ibid.*, p.111)". It is this particular contradiction that explains the superposition of this ever-more conspicuous architectural ambition with the extreme deterioration of health and safety conditions in the workforce in cities like Dubai (Sönmez *et al.*, 2011) – or the tensions between India's '100 smart cities' technological challenge and the subsequent production of 'new' inequalities and dynamics of power that revolve around 'smart citizenship' imaginaries (Datta, 2017).

A common sight on the hoardings of what essentially are the new developer's dreamworlds of post-Olympic London, alsong with 'executive marketing suites' and CGI visualisations², are banners displaying pictures of smiling construction workers, accompanied by slogans such as:

-

² See Melhuish et al. (2016) on the importance of CGI in the production of urban aesthetics

"We Are Considerate Constructors" or "Considerate Constructors improve the image of construction". Created in 1997, this scheme's rationale is as follows:

If all construction sites and companies presented *an image* of competent management, efficiency, awareness of environmental issues and above all neighbourliness, then they would become a positive advertisement [...] for the industry as a whole. (Considerate Constructors, 2018) (italic added)

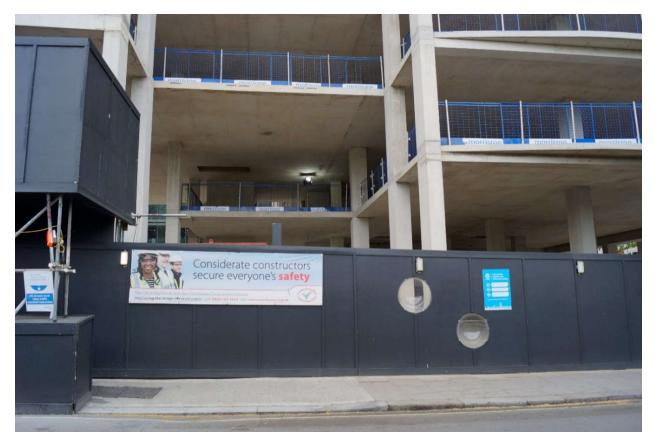


Figure 8 – A "Considerate Constructors" panel, accompanied by two 'fish-eye' viewing panels, Temple Place, London (Author's own)

What are these panels really advertising? The construction site *itself*, or its image? A schizoanalytic reading of the city says both – at an era when commodification spreads across all aspects of urban life. The "spectaclist" city (Debord, 2002) is indeed one where peeping through the viewing panel of the construction site amounts to observing its reflected and performed symbolic reality. Protecting workers' rights and preventing hazards in the 'considerate' construction site is a matter of "corporate social responsibility" (Considerate Constructors, 2018) – the site's self-portrait is painted following the only spatial meanings that are allowed by apparatuses of control.

Cranes as allegorical figures of growth...

a b



 $c \hspace{3.5cm} d \\$





Figure 9 – A 'lifting' iconographic selection – (a-Construction Industry Federation, 2019; b-Deloitte, 2016; c-LSE Growth Commission, 2018; d-Building Worker, 2018)

Like the multiplication of smokestacks during the Industrial Revolution onwards that still bear a strong symbolic historical value in contexts of industrialisation and deindustrialisation (Watson, 1991), construction cranes are an icon for those who care about the evolution of the construction market. Every six months, the business consultancy company Deloitte publishes the *London Crane Survey*, "A report that measures the volume of office development taking place across central London and emerging London submarkets" (Deloitte, 2018:3); it is important to remember that the technical role of cranes is to realise projects that are qualified as 'significant' (*Ibid.*) at the scale of a 'Global City', hence that survey's name. Interestingly enough, the 'crane-counting' part of the survey's methodology is not central to its realisation: what counts the most in the development pipeline is the size of schemes and the pace of development (*Ibid.*), and while it can be argued that the number of cranes can act as a proxy for these measures, there may also be a symbolic attachment to the figure of the crane in these endeavours.

In the production of neoliberal 'economic growth' imaginaries, complex social and economic power dynamic are condensed into allegorical images, that may seem to appear hegemonic and apolitical when repeated and reproduced (Joseph, 2012). The image of the crane therefore comes handy for those who want to prove that economically speaking, the only way forward is up, though the metaphor of lifting (Figure 9). The crane becomes here a tool, a symbolic instrument of auditing that feeds the 'evaluative' neoliberal state: a system of governance that relies on a multitude of performance indicators and turns them into a normative, rational way of thinking progress (Giannone, 2016).

...and symbols of collapse

In January 2018, the outsourcing and construction firm Carillion – one of the largest in the UK – went into liquidation, calling into question the entire functioning of infrastructure management in the country, notably through the question of private-public partnerships and their damages, since four of them were the final straws that broke the camel's back for the company (House of Commons, 2018). The image that was captured by the media to illustrate the sudden desertion of dozens of construction sites was of 'Carillion' signs being removed from cranes (Figure 10), which not only added to the drama of the situation but also created an association between this event and the lexical field of 'collapse' ('breakdown', 'crash') in its press coverage (The Guardian, 2018; Politico, 2018; New York Times, 2018).



Figure 10 – A Carillion sign being taken off from a construction crane in the City of London, in January 2018 (Sorabji, 2018)

The wider argument on the place of the crane in the field of 'symbolic politics' (Bourdieu, 1997) relates to its potential to move across space, when it is erected as much as when it stops being active, or even when it literally collapses (Building, 2003; Construction Enquirer, 2016). Each 'crane tragedy', because of their dramatic and tangible nature, simply resonates in the true sense of the word. Throughout this chapter we have seen how cranes serve as infrastructural processes that not only reflect but act on contradictory facets of neoliberal urbanism – be it in times of promise or failure.

Chapter 3

Urban ballets/lines of flight: cranes as public artworks

Being able to read the sheer diversity of embodied forms that the crane can take, and to translate it onto an analysis that is relevant to the molecular and molar facets of late capitalism should not be a straightforward task – elucidating the schizogeographies of desiring-materials and institutions is also about tracing *affects* and *affection*:

Neither word denotes a personal feeling. Affect (Spinoza's affectus) is an ability to affect and be affected. It is a prepersonal intensity corresponding to the passage from one experiential state of the body to another [...]. Affection is each such state considered as an encounter between the affected body and a second, affecting, body... (Massumi in TP:xvi)

Since the themes of encounter, representation and performance are central to affective politics (Thrift, 2004), this chapter takes as an epistemic mooring the problems that existing performance art geography literature pose (Miles, 1997; Zebracki and Palmer, 2018), which enables us to problematise infrastructure through questions of intention and public response, manufacturing and acting, and the importance of space and time in the 'craned' urban landscape.

The variability in the setups of the six performances I have chosen – which range from 'traditionally-delimited-in-time-and-space' urban performance art (in *Dance of the Cranes* or *Kranensee*) to architectural work in the *Arcelormittal Orbit* – deliberately questions the overlaps between 'art' and architecture, 'public' space and private endeavours, all within the 'worlds' of art production (Becker, 1982).

Choreographic encounters

INTRO

I.

The open field

The first settlement and the battle at Aspern

TT

The mechanization, the mechanical awakening, attempts to fly

The establishment of the airfield

The wars, the Russian occupation and the motor racing

III.

Aspern's loss of importance

Aspern is abandoned

IV.
A new vision is arising
A draft is forming
The development of a new city
Architecture (order and concretion)
Construction site (rhythm formed out of chaos)

V.
The forecast
Glowing future
The vision of a city

GRAND FINALE

Program for the *Kranensee* ('the Crane Lake') installation, Aspern (Urban Lakeside Vienna Project, 2014)

Over 17 intense minutes, the audience that came to this peripheral suburb of Vienna experienced a one-off performance (Figure 11), played out at the "largest urban development venture ever" in the history of the city (Urban Lakeside Vienna Project, 2014) – that for the occasion had turned its 40 cranes into a close-knit machinic network of more-than-material ballerinas. Decorated with LED ribbons and accompanied by a custom soundtrack that ranged from "classic, romantic soundscapes [to] modern electronic sounds", this highly engineered performance was plotted using 3D CGI technologies, that gave to the spectacle its multisensorial, choreographed flavour. The title "Kranensee" is a play on words with "Schwanensee" (Swan Lake), and while there is an obvious link to be drawn with the Viennese history of ballet tradition – hence the 'theatre-like' structure and semiotic codes of the event – it may be interesting to pose the question of what Jane Jacobs described as the "sidewalk ballet" (1961) in her passionate depictions of everyday life geographies in New York's West Village, and its relevance to this example.

"I have made the daily ballet of Hudson Street sound more frenetic than it is, because writing it telescopes it", she says (*Ibid.*, p.70), and it is a similar process that happens in performances that deliberately beautify the crane, such as *Kranensee* or *Dance of The Cranes* (Vickered, 2015, Figure 12), which had a rather similar setup – except that the latter went 'on tour' across the United States and Canada between 2015 and 2016, thanks to a simpler technical layout. A Washington Post critic, watching a *Dance of The Cranes* performance (Washington Post, 2015), indeed found, for instance, that the speed of cranes was simultaneously a limiting factor in the sensational value of the event – "After all, they were ordinary cranes, performing their usual functions at an ordinary speed" (*Ibid.*) – that also was crucial in its goal, its efficiency in building a collective experience where cranes are gazed at in a different way.

In Deleuzian terms, the *line of flight* is a molecular, deterritorialising "possibility of escape; it is the elusive moment when change happens, as it was bound to, when a threshold between two paradigms is crossed" (Fournier, 2014:121). The whole construction site, more than ever during the ballet encounter, expresses itself as a becoming-other that follows the lines of flight traced by the multitude of desiring-machines (the crowds of spectators, musicscapes, the city at night, and so on) that make up its imaginary. Some artists, like Mader and Wiermann with their installation *Grabber* (2018), consciously re-appropriate and rearrange these lines of flight:

"An interesting aspect of any construction site and the theme of the installation is the transformation from 2D into 3D, from ideas into objects, from visions into reality. In a seemingly surreal staging strange protagonists perform strange things: focussed, fast, at night, in the air, illuminated in a peculiar way.... The processing of the original architect's blueprints anchors the events in reality. Due to the double movement, the ephemerality of the arrangement and a certain degree of absurdity, the "building process" seems to be possible in another way: playful and experimental...." (Mader and Wiermann, 2018)

In *Grabber* (2018), viewers found themselves, at night and in the middle of the Coal Drops Yard urban 'redevelopment' of North London Victorian era industrial warehouses, facing a motionless crane holding a projection screen (Figure 13). The screen projects a 3D animation of cranes, themselves holding, luffing and swinging everyday items, entire buildings, and architectural blueprints – all measuring the same size. The crane breaks down genealogies, scales and dimensions, and goes against the apparent order and meticulousness of building logics by creating a chaotic, fractal³ space of expression.

Nonetheless, when temporal and spatial scales are de-magnified, these revolutionary flows are easily outweighed by slower, molar processes that reterritorialize the scene. There is a whole politics that lie behind 'gamification' initiatives in neoliberal cities (Vanolo, 2018) – which are reflected in Mader and Wiermann's manifesto. There is also a feminist critique to be made of both *Kranensee* and *Dance of the Cranes*. These works, which clearly associate the 'elegance', the shine and the movements of cranes at night, through space, with the imaginary of the female body; which, as Rose explains (1993) reveals how self-sustaining and repressive the male gaze is, but also justifies the time limitations of these performances – "Visual pleasure is seen as something disruptive, and its persistence leads to cultural geographers' suspicion of landscape as secretive, ambiguous, duplicitous, mysterious, and Other—feminine again" (p.101).

³ See TP:487-488 and De Freitas (2016) on the metaphor of fractals to conceptualise 'fuzzy' ontologies



Figure 11 – Kranensee, by the Urban Lakeside Vienna project (2014). Image: Christiansen



Figure 12 – Dance of the Cranes, by Brandon Vickerd (2015). Image: Vickerd

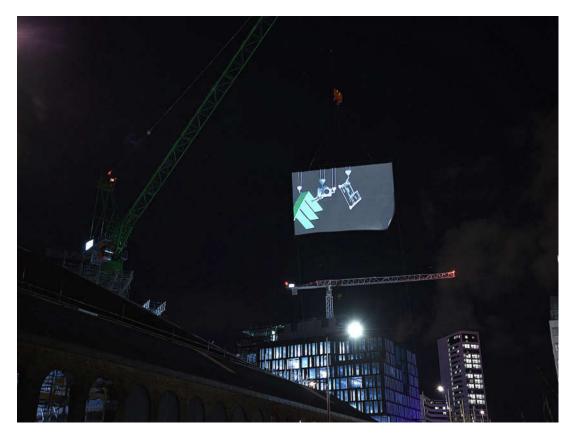


Figure 13 - Grabber, by Mader and Wiermann (2018). Image: Mader and Wiermann

Cranes by day: passive performances

The distinction that I made between the three former and the three next examples relates to the circadian urban clock – the kind of observations one could make about public art at night as secretive, interactive, *underground*, and the subsequent development across the Global North of 'Art Nights', 'Nuits Blanches' and museum 'lates', find their analogue in assessing a performance's tolerance to bright light. The absence of light and music as something that freely emanates from the event means that the encounter between the work of art and the intended audience is of a different order.

The sky continually changes colour and the cranes respond to the changes, I can see a yellow crane from my living room, yesterday the sky was stormy and the light was quite eerie and the crane just glowed. (Morag Myerscough, Now Gallery, 2016)

Morag Myerscough's *Colourblock Cranes* (2016, Figure 14) was a long-term installation, designed to last for the duration of the 'Greenwich Peninsula' development, in South East London. Commissioned by the firm 'Knight Dragon', her recruitment was stimulated by the desire to "animate and enliven" the area (INT, 2016), as well as building a whole identity revolving over the development vehicle, as its official slogans show ("Be a peninsula original"; "creative London has a new home:

design district") (Greenwich Peninsula, 2018). The cranes, here, do not detract the urban gaze towards a momentaneous, alternate urban potential, but rather attract it, in the same way the smiling faces of the 'considerate constructors' do. Further than lime green and neon pink, the hues that these cranes wear are "cool, bohemian, and artistic" (Mould, 2018:199). The artwashing-machine prints its material mark on construction infrastructure and lets it steadily relay its splintering semiotic symbols over space. The degree of passivity that these performances bear gives me serious doubts as to know if the artist is really a marketing agent, or if the development manager is the actual artist – or even if I was right to classify them as performances.

Kapoor and Balmond's *Arcelormittal Orbit* (2012) is a perfect embodiment of these doubts. Built as part of the London Olympic Park development, this 115-metre 'sculpture and tower' is the result of a second collaboration between the star sculptor Anish Kapoor and Cecil Balmond, an architect from the firm Arup.

"In fact, there is actually a history of famous towers, so you can't just pretend they don't exist. They've been made for good functional reasons and for other, less functional, reasons. They exist in reality, with the Eiffel Tower remaining the most iconic structure built for a festival, but they also exist in the imagination, so in some way or other we had to take on Tatlin [soviet architect who had the project of building a monument to the Third International]" (Kapoor in The Guardian, 2014)

The aesthetic intricacies of the *Orbit* are somewhat reminiscent of two cranes for which the courtship dance morphed into a literal fusion – their exploded structures are interwoven into a metal mesh. When Kapoor envisions it as a monument to our times, what does it then celebrate? It can be, on the one hand, seen as a monument to the assimilation of public art by branding and (sub)contracted work – an art that does not delegate effort to the audience but to commissioned builders and experts (Harvie, 2018). The audience is lost, somewhere between the top and the bottom, the drivers' cabin and the site manager, the being-build and the built: and that is what Leandro Erlich decided to play with in his work *Pulled by the Roots* (2015, Figure 16). On the central square of Karlsruhe, in Germany, a 'manufactured accident' of construction: a house, modelled on the historical Karlsruhe architectural style, dangles from an immobile crane, and a whole living presence is hitched to its floor. Over the course of four months, while an underground tram system was being built under the square, this fully deterritorialised presence acted as a hyperreal machine, "an image, without resemblance" to urban life (Deleuze, 2004:295).



Figure 14 – Colourblock Cranes, by Morag Myerscough (2016). Image: Wilmot

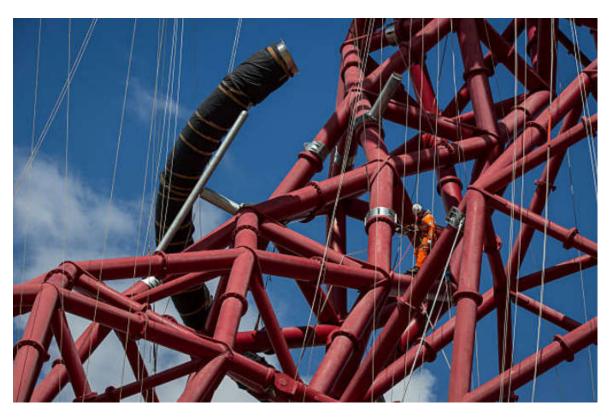


Figure 15 - The Arcelormittal Orbit, by Anish Kapoor and Cecil Balmond (2012). Image: Stothard



Figure 16 – Pulled by the Roots, by Leandro Erlich (2015). Image: ZKM

Known for his works around the figure of the mirror and the surface – like in *Swimming Pool* (2012), where we find ourselves underwater without being in contact with the water or *Dalston House* (2013), where spectators can freely roam over the virtual image of a building's edge – Erlich here does not the bodies of the audience, but their perception of change at the centre of the optical illusion.

The installation is designed to challenge the residents' perception of the construction works as an "eyesore" and to act as a reminder that "underneath the tons of metal and concrete of our cities, a vital organic presence remains." (Leandro Erlich, in Dezeen, 2015)

The territorialisation of movement

In the thread that links all six performances there is also, as Erlich explains (2015), a deliberate will to distract from the "eyesore" of construction sites, and these public art events would indeed be neutralising agents that re-appropriate the meaning of construction material, under claims of civic beautification. The war against the "eyesore" is, however, a plight that is shared by most social classes and activities under a neoliberal regime, including art, as Deutsche argues

(1988). Public art needs to be rethought in defiance to the reterritorialising forces – since it is impossible to keep on conceiving "aesthetic urban practices [as dependent of] the approval and sponsorship of big capital" (p.65). Embracing the eyesore is first about pragmatically acknowledging the *art worlds* that assembled the artists' choices, but also about knowing the revolutionary potential of the everyday as an aesthetic object. It is no coincidence if, in *What is Philosophy?* (1994), Deleuze and Guattari take Duchamp's 'readymade' as an example of a form of art that is freed from 'medium specificities':

The readymade is first a sublime moment dislocating experience from its conceptual conditions, and allowing it to receive the aleatory forces of the event. This is the moment of intensity=0 where intuition is undetermined by the transcendental syntheses of space and time, and is instead able to develop in relation to this immanent outside as a spatio-temporal dynamism (Zepke, 2017:764)

The use of the readymade as tool of research is, I suggest, a possible way out for the schizogeographer who finds themselves overwhelmed with 'movement' as a measure of space and time – when trying to deconstruct the urban everyday as dependent of progress, 'expansion' and as a reflection of wider performances. 'Space' and 'time' are also a measure of movement in the world of readymades: in that sense, the infrastructural landscape of infinitesimal movements, often hidden or neutralised, is a 'building block' of urban life. Central to the depoliticisation of the construction site is the invisibility of the construction worker, their life, their point of view, and especially what they *do*, or generate.

Chapter 4 A ladder to climb: inverting ecologies?



Figure 17 - Image: Still from Debord's Society of the Spectacle movie (1973, 8:33)

Guy Debord, on a filmic backdrop of massive construction sites and cranes in France, transposes the Marxian concept of alienation to the urban 'spectaclist' society. Major French cities were, at the time, home to the reterritorialization of hundreds of thousands of migrants, mainly from the Iberian Peninsula and North Africa – an ambiguous initiative from the state, between migrants' 'Republican' integration and their systematic ostracization to marginalised classes (Cooper, 2009). Debord's voice warns us about the subsequent construction of a new proletariat that carefully dissociates workers from means of production:

"Workers do not produce themselves, they produce a power independent of themselves. The success of this production, the abundance it generates, is experienced by the producers as an abundance of dispossession. As their alienated products accumulate, all time and space become foreign to them. The spectacle is the map of this new world, a map that is identical to the territory it represents. The forces that have escaped us display themselves to us in all their power." (Debord, 2002 [1967]:16).

Lonely lives

It was not until Eva Weber's *The Solitary life of Cranes* (2008) that Debord's external and rather faint observations on construction sites – a few frames of a movie – were proved right. This 24-minute documentary takes us into a radically different universe from the one of *Dance of Cranes* or *Colourblock Cranes*. Far from the sound-and-vision, entertaining experiences of these examples, the director alternates with care between contemplative wide shots of the city from above and details of the crane mechanics (Figure 18). The only music that can be heard, apart from the radio messages that the drivers receive, is the almost deafening howling of the wind and the machinic squeaking between the metal parts (which definitely reignited my fear of heights).



Figure 18-Stills from The Solitary life of Cranes (2008, 15:26 and 5:24)

No one shouts at you because, you know, they can't tell you what to do [pauses], only on the radio. We've got no one to answer to: you're your own boss up there. (A crane driver in Weber, 2008, 6:56)

Every single detail of this movie is reminiscent of the absolute sensorial isolation that crane drivers undergo, but also of how a whole new meaning of the becoming-crane is produced/encoded, and this typically is, for Guattari (1974), a demonstration of the twin processes which govern alienation: fragmentation and multiplicity. Cranes fragment, or splinter, the functioning of the construction site by impeding visual and acoustic communication, and

establish a very real spatial distance between the driver and other individuals. Nonetheless, cranes also produce new multiplicities, be they material or social:

There's another layer in the city. There's the people on the floor, the people on the roofs – then there's us above them. (A crane driver, in Weber, 2008, 3:00)

The whole 'us-above-them' imaginary, deployed all along the documentary by several crane drivers, coincides with testimonies I collected from two different safety representatives in the London construction industry, who respectively mentioned that crane drivers were considered as "lunatics" and as the "belladonnas" of the construction site. The libidinal economy of the building site produces the 'enjoyability' of crane-driving – and in the same vein reduces the driver to its dividual identities: human communication is obsolete in the post-human crane.

'Hacking' the crane

As I climbed up onto the counterweight of the crane on top of the building, my whole body tensed. It was a combination of the icy wind and the sheer weight of the moment that shocked me. I got down low, slowly pulled myself to the end of the counterweight and peered over the edge, down to the River Thames where the permanently docked HMS *Belfast* battleship looked like a bathtub toy. A ripple of adrenaline rolled up my spine, causing a full-body shiver. My hands gripped the edge of the counterweight tighter, knuckles whitening. [...]

We found the cab of the crane open and sat down inside it. 'Gary' pointing to a glowing green button on the control panel, said, 'Watch this, I'm going to build the Shard!' and pretended to press the button.

We only lasted about half an hour on top before our muscles began to seize up from the exertion and chill. We were actually yearning for the stair climb down, which is always much easier than coming up. (Garrett, 2013:12-13)

Bradley Garrett, in this overtly eroticised account – or tale – of how he managed to climb the Shard for the first time, dabbles in some seemingly light-hearted role play session that is everything but ludicrous. Garrett's concept of 'place-hacking' (2013) – which, with UrbEx, he reclaims as a contemporary interpretation of Situationist practices (Debord, 1957) – is about crossing boundaries and re-appropriating what is 'forbidden', or has a price, to the urban dweller. While 'urban exploration' adventurers share the rationale of Situationism – "a schizophrenic adventure in which they let their desire flow in multiple directions" (Horvath and

Maicher, 2016:38) – there is something about Garrett's work that Mott and Roberts (2013) find highly problematic: his absence of gender, race and class consciousness. Letting one's own desire flow in random orientations when these become potentially dangerous for the explorer is not something that is even conceivable for those parts of society for which these acts could be highly stigmatised (*Ibid.*). It might also be interesting to present crane drivers with such accounts of their workplace environments, as I am rather sure that they may disagree with the assertion that they are the ones who are *building* what they assemble (Weber, 2008).



Figure 19 - "St Alphage House, City of London, UK" (Garrett, 2013)

Verticality against war-machines

"just as Hobbes saw clearly that the State was against war, so war is against the State and makes it impossible" (TP: 359).

Over the four previous chapters, we have observed and deconstructed the active participation of cranes in the formation of neoliberal apparatuses of control, and this chapter in particular attempted to address one heavy underlying question – is it possible to conceive a crane as a machine that is free from the strain of reterritorialisation, and subsequently, what is a true act of defiance against verticality?

The concept of war-machine, if it does not answer directly these questions, can at least help us frame the philosophical issues that splintering infrastructures pose. A war-machine (not to be

understood in the military sense), when autonomous, is a desiring-machine characterised by the fact that its properties are at the polar opposite to the ones of the capitalist state⁴. Dispersion when the state orders, difference when the state homogenises, spatial arrangements instead of territorial conflicts, horizontality against verticality (TP). War-machines fully function outside of the state, and so should any group of people that wishes to free themselves of its hold. Nomadology (Deleuze and Guattari, 1986) is the term attached to studying the tensions between the state and the war-machine, and how the latter must constantly renew itself in order to escape its recapture by the former. Infrastructurally speaking, an anti-capitalist movement should therefore resist the material imaginaries of verticality, movement, or work by building, in the strictest sense, alternate ones.





Figure 20 - Boy with Machine (Lindner, 1954), and The Crane Driver (Currie, 1987)

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⁴ 'Stateness' is not limited to governmental institutions. It is the result of certain practices and postures of power (Painter, 2006)

Transition: note on the cover image and limitations

Boy with Machine, by Richard Lindner (Figure 20), is one the first pictorial works that are referenced in the introduction of the *Anti-Oedipus*, and probably the one that allowed me to understand the concept and the functioning of desiring-machines across space. The young "turgid" boy grafts his hands, themselves already desiring, onto a *socio-technical* machine, but what this painting also reveals is a sense of dearth: the boy has not played, he is playing, the boy-automaton machine have not *become* one, the movement never really stops:

Producing, a product: a producing/product identity. (AO:13)

I found Ken Currie's painting *The Crane Driver* by chance, while I was doing my research for this IGS, and instantly thought of its character as the grown up version of Lindner's Boy: his lever, his headphones and his spyglass make up an ever so complex sociotechnical machine, which is hitched to his whole bodily integrity as a worker, and as a machine.

I, as a desiring-machine, am also bound to a multitude of machinic stimuli, which as my hands, head and feet walked through the streets of East London, made up my ideas of what was *good* to write: the paths I took as a young left-wing white male foreigner *situated* the knowledge I produced, somewhere between my body and the groups I belong to (Harraway, 1988). It is also important to acknowledge, since a large part of my analysis relies on semiotic methodologies, that I may have unconsciously associated words or signs with, for instance, the codes and the values of neoliberal or masculinist discourse, which I have been taught to critically track down throughout my academic formation (Gorban, 2016). Finally, the deliberate ideological bias I chose in favour of schizoanalysis as a way to reframe infrastructural geographies should by no means be taken as a claim that it is universally valid: it is, in addition to an independent geographical study, a *thought experiment*.

Conclusion

This work, conceptualised at the crossroads of the emerging 'infrastructural turn' of critical urban geography and the field of cultural studies, takes construction infrastructure, and the specific example of construction cranes, to lay out a research journey that follows the making and unmaking of urban material imaginaries in the neoliberal city.

'Craned' urban imaginaries are (1), constructed as an allegorical figure of neoliberal growth, flagship of the ideal, 'considerate' building site; a figure that, however, can easily turn against itself when the industrial desiring-machine collapses, (2) performed as instruments of deterritorialization, displacing these imaginaries to form urban ballets, 'creative' heavens or absurdist alternatives to infrastructural landscapes, and (3) contested by reversing the point of view through which the city is seen; climbing the crane ladder calls into question the location or even the existence of the real, possible and virtual realities – and as cranes keep on luffing, swinging and assembling the urban, one might wonder how the neoliberal city would hold up without their omnipresence.

The methodological target of this IGS was to reframe post-structuralist ontologies of infrastructure, away from the vagueness of the "Assemblage Theory" and closer to libidinal approaches to late capitalist production – and schizogeography is a theoretical and methodological guide that enables the critical thinker to navigate more wisely through the plane of immanence. Further than research for research's sake, I believe than a schizogeographic approach to reading space is vital in times of political breakdown. Foucault had proposed, as an alternate title to *Anti-Oedipus*, 'Introduction to the Non-Fascist Life', because the target of schizoanalysis is also to uncover "the fascism in us all, in our heads and everyday behaviour, the fascism that causes us to love power, to desire the very thing that dominates and exploits" (Foucault, in AO:xiii). The fascism of contemporary urban politics is, of course, not the one of Hitler and Franco, but one that hides behind the hegemony of neoliberal splintering politics, one that can only be broken by the war-machines of dissension: allowing ourselves to *do*, without desiring, demanding or receiving from the state (Rancière, 2010).

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Art installations

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Erlich, L. (2013), Dalston House [Installation], London, July-August

Erlich, L. (2015), *Pulled by the roots* [Installation/Sculpture], Marktplatz, Karlsruhe, June-September

Kapoor, A. and Balmond, C. (2012), *Arcelormittal Orbit* [Sculpture/Building], Stratford, London

Mader, H. and Wiermann, H. (2018), *Grabber* [Light Installation], Coal Drops Yard, London, January 18-21st

Myerscough, M. (2016), *Colourblock Cranes* [Installation], Greenwich Peninsula, London, March 2016-November 2017

Urban Lakeside Vienna Project (2014), Kranensee [Light installation], Aspern, Vienna, February 15th

Vickerd, B. (2015), Dance of the Cranes [Light installation], Washington D.C., July 15th

Films

Debord, G. (1973), The Society of the Spectacle, Paris: Self-Produced

Weber, E. (2008), The Solitary life of Cranes, London: Odd Girl Out

Appendix 1 – Ethical and Risk approvals

Research Ethics Office Frankin Wilkins Building 5.9 Waterloo Bridge Wing Waterloo Road London SEI 9MH Telephone 020 7848 4020/4070/4077 recibilet on uik



24/10/2018

Nicolas Szende

Dear Nicolas

Making and Unmaking the city

Thank you for submitting your Research Ethics Minimal Risk Registration Form. This letter acknowledges confirmation of your registration; your registration confirmation reference number is MRS-18/19-8766

Please note: For projects involving the use of an information Sheet and Consent Form for recruitment purposes, please ensure that you use the KCL GDPR compliant <u>Information Sheet & Consent Form Templates</u>

Be sure to keep a record your registration number and include it in any materials associated with this research. Registration is valid for **one year** from today's date. Please note it is the responsibility of the researcher to ensure that any other permissions or approvals (i.e. R&D, gatekeepers, etc.) relevant to their research are in place, prior to conducting the research.

Record Keeping:

In addition, you are expected to keep records of your process of informed consent and the dates and relevant details of research covered by this application. For example, depending on the type of research that you are doing, you might keep:

- . A record of the relevant details for public talks that you attend, the websites that visit, the interviews that you conduct
- The 'script' that you use to inform possible participants about what your research involves. This may include written information sheets, or the generic
 information you include in the emails you write to possible participants, or what you say to people when you approach them on the street for a survey,
 or the introductory material stated at the top of your on-line survey.
- · Where appropriate, records of consent, e.g. copies of signed consent forms or emails where participants agree to be interviewed.

Audit

You may be selected for an audit, to see how researchers are implementing this process. If audited, you will be expected to explain how your research abides by the general principles of ethical research. In particular, you will be expected to provide a general summary of your review of the possible risks involved in your research, as well as to provide basic research records (as above in Record Keeping) and to describe the process by which participants agreed to participate in your research.

Remember that if you have any questions about the ethical conduct of your research at any point, you should contact your supervisor (where applicable) or the Research Ethics office.

Feedback

If you wish to provide any feedback on the process you may do so by emailing rec@kcl.ac.uk.

We wish you every success with this work.

With best wishes

Ms Laura Stackpoole

Research Ethics Office

no-reply <mark.mulligan@kclgeography.net>

jeu. 18/10/2018 16:15

À:Szende. Nicolas <nicolas.szende@kcl.ac.uk>:

Cc:Dickens, Luke <luke.dickens@kcl.ac.uk>; kcl - safety_sga <safety_sga@kcl.ac.uk>;

Dear Nicolas Szende

Your countersignatory, luke dickens@kcl.ac.uk (copied) has now countersigned your application. Since you have indicated your research is of 'insignificant risk' type, no further action is required.

If you are a student and if your project requires ethical approval you must add your approval number to the form when available.

Your assessment is accessed, edited, countersigned or reviewed using this link.

Each time you submit changes, the form will email you and your countersignatory, who will need to review them.

A PDF copy of the mitigating actions document for common hazards is available here.

Sent on behalf of the King's College London, Department of Geography, Safety Committee

Do not reply to this message. Any queries should be emailed to <u>safety_geography@kcl.ac.uk</u>

Your research risk assessment is now:

You are:: Staff here to countersign the assessment

This assessment is for work carried out by:: Undergraduate year 3 student

Student number: 1648935

I confirm that I will/have applied for research ethics approval: Yes

If required, when you have ethical approval log the approval number here:

Provisional project title: Making and Unmaking the City

Location of the research: London

Estimated date you arrive in this area: 2018-10-01

Estimated date you leave this area: 2019-07-31

I/we have pre-existing medical conditions or disabilities that are likely to prevent me from undertaking the proposed project safely: No

Have the FCO advised against travel to this area?: No

Insignificant or significant risk?: Insignificant

Your full name: Nicolas Szende

Your KCL email address: nicolas.szende@kcl.ac.uk

Your department: Geography

Your signature: yes

Date of signature: 2018-10-18

The KCL email address of your countersignatory: <u>luke.dickens@kcl.ac.uk</u>

Brief record of discussion:

Request for changes:

Countersignature (completed after you submit): LUKE DICKENS

Appendix 2: Original IGS Proposal

Making and unmaking the city: putting construction cranes on London's infrastructural transect



Figure 1- Greenwich Peninsula and the 'Colourblock Cranes' project, seen from the Greenwich Cable Car (Greenpen, 2016)

Introduction

In September 2006, a tower crane collapsed in a Battersea housing development site, killing its driver and a passerby (Construction Enquirer, 2016). While, in the construction sector, this drove debates over the dangerousness of these machines (Construction News, 2006), cranes in Battersea have also borne a metonymic meaning linking them to the start of the Battersea Power Station mega housing project – a 2013 Evening Standard article was for instance titled "Power to the people: a last lingering look at Battersea before the cranes move in". Paradoxically enough, tower cranes that were used in the former power station will be restored and reconstructed as a 'heritage feature' when the estate opens (Battersea Power Station, 2018).

These observations are only a case example, and they illustrate how many meanings and representations construction infrastructure can bear in an urban landscape. My Independent Geographical Study will seek to bring these different images together at the scale of London by integrating the organisational structures, the social affects and the physical bodies that define construction cranes as a part of the London urban assemblage.

Taking a holistic approach when it comes to building infrastructure is all the more important when London's housing market boom – that is closely linked to how significant cranes have become on Greater London's urban transect, given that tower cranes are mainly involved in Luxury apartments – has left an impressive mark on its social organization and political climate. This project will moreover attempt to interlace visual methods, graphic models and oral testimonies to get a closer insight into the London geographies of cranes.

Literature review

Through striation and smoothness

"The key point (...) is that technologies are not merely material artifacts and that the whole tradition in social sciences of rendering the world into this binary of the social, which is the subject of social science, and the technical (...) is radically unhelpful." (Graham, interviewed in Farias and Bender, 2009, p.198)

In this quote, Graham deals with how Deleuze and Guattari's *Thousand Plateaus* (1987 [1980]) can be applicable in the context of urban material semiotics. *A Thousand Plateaus* was fundamental deconstructionist work that influenced many social science disciplines by treating knowledges as a 'rhizome' where all elements coevolve, without any prevalent subset.

When applied to geographical studies, we end up with concepts such as 'space' that need to be thought through interrelations between places, populations, flows, objects and so on, as Massey suggests in *For Space* (2005). Graham's quote could therefore relate to a 'sociotechnical' plane of immanence where processes transgress the human and non-human or the material - landscape boundaries. This could for instance help considering the crane as a cyborg extension of the Human.

ANT (actor-network theory) and Assemblage theory are the two main approaches used nowadays in this geographical thought paradigm (Müller and Schurr, 2015), and, while they are very similar in the way they consider spatial relations, they should be considered as 'close siblings' with different assets that should 'cross-fertilise' each other (*ibid.*). ANT could provide assemblage theory with more relation 'durability' related vocabulary while assemblage theory embraces more deeply notions of 'desire' when related to body/space relations (*ibid.*).

These general concepts then need to be applied to urban processes in London and their timeframes. To do so, Graham and Marvin's (2001) concept of 'Splintering Urbanism' (i.e. how, in a neoliberalising economy, the new 'urban ideals' unmake infrastructure into smaller packages that avoid the unprivileged, create enclaves and are contested) will be adapted on construction infrastructure, which would then be linked in my study with the tradeoffs between 'smooth' 1987 and 'striated' spaces (Deleuze and Guattari, [1980]). This categorization is often used in urban geography (Doel and Hubbard, 2002; Mould, 2009), and here 'striated' relates to the 'grid-like' assemblages that limit movement, are usually linked to powers of enforcement and surround the smooth spaces, which usually correlate with fluidity, and can cut through striated spaces when the latter are contested (Mould, 2009).

Vertical infrastructures and their representation



Figure 2-A crane driver in London. From The Solitary Life of Cranes (Weber, 2008)

In *The Solitary Life of Cranes* (2008), Eva Weber portrays London through the eyes of crane drivers. "Coming down... it's like coming out of a cloud. (...) You think, Jesus, what a different way of life down here than what it is up there'." says one crane driver in this documentary. This particular, distorted version of the urban landscape has something to do with an additional coordinate nowadays necessary to understand urban dynamics: verticality.

'It is similarly not possible to assume whether elevated transport structures are treated as impositions or welcomed as providing shelter and shade (...); and how specific types of vertical space (...) generate different understandings and negotiations of vertical urbanism." (Harris, 2014, p.609)

At a time when building innovation focuses on showing off how to reach extreme heights and how can some materials be 'resilient' to that height, while skyscrapers are mass-produced, Harris (2014) coins the term 'volumetric urbanisms' to describe how classic urban geography processes, such as urban sprawl, displacement, enclaves, and so on, can correlate with vertical urbanisms. That is what Graham does in *Luxified Skies* (2015) where he links the neoliberalisation of governance and how the corporate economy led a discursive shift in urbanism, that demonized high-rise social housing while setting up a new urban ideal – namely luxury condominiums – that relied on 'trickle-down economy' myths.

Symbolic politics

The way the installation, movement and action of cranes are framed can be studied through the filter of symbolic politics, that can be defined as the way several actors (such as residents, corporation, the state) experience politics during a certain process (Sakizlioglu and Uitermark, 2014), here related to building. Bourdieu (1997) theorized symbolic politics as the ones that 'promote and impose visions of reality'. Power agents have the capacity to stratify the city's social order (*ibid.*) and have legal agency on classifying urban elements though time and space. Sakizlioglu and Uitermark (2014) take two main aspects of symbolic politics and apply it on gentrification phenomena.

The politics of classification are there noticeable when it comes to stigmatizing some residents and making some other too visible. This can be linked to the recent corporate orientations that have, for instance, interpreted Florida's concept of 'the creative class' (2002) and turned it into a policy tool that basically classifies citizens in a Manichean way.

The politics of timing are another interesting research tool that Sakizlioglu and Uitermark (2014) put forward. It states that the 'powerful' are the only ones that have the choice of 'taking the initiative' or not, in the housing market. This gives a new meaning to long waits without any state intervention or short waits before imposed deadlines when imposed on local communities – both strategically leading to powerlessness and anxiety for the ones undergoing these changes (*ibid.*).

Subjects and affects

The 'Affect' is, in the Thousand Plateaus, "a prepersonal intensity corresponding to the passage from one experiential state of the body to another and implying an augmentation or diminution in that body's capacity to act." (Massumi in Deleuze and Guattari (1987 [1980])). This concept, if applied to urban assemblages, adds an intimate scale to how social changes are materialized through space, without necessarily needing to go further than the everyday or the self-conscious. This framework is used in urban geography by Nigel Thrift (2008) and his non-representational theory, suggesting that even before there is a representational effort related to a human or nonhuman 'thing', these affect each other in an 'unexceptional' way. Any physical property of a 'thing' matters in this context; all senses have an intrinsic importance (Ibid.).

Affect is central in Linz's (2017) study of everyday assemblages as a displacing factor. For Linz, bias is not necessarily needed from social groups, and exclusion can also be felt in the non-intentional prepersonal. In any urban context, an 'affective urbanism' can add up a non-traditional layer of depth to the study that would help drawing answers from everyday acts.

Methodology

The central methodological element will be several semi-interviews as well as oral histories, collected among construction workers that work on sites that are rich in tower cranes as well as local communities that live or work in a short radius from the construction site (500 metres). Oral histories will be privileged if I have the opportunity to talk with crane drivers, or residents that have seen the total extent of how crane infrastructure is deployed in their neighbourhood.

Riley and Harvey (2007) emphasise the importance of oral history in Geography when it comes to giving a voice to those who are not that 'visible', as well as letting them build up on a theme without having to fall in any 'literature review' worthy dichotomies, given that efforts are made from the interviewer to have the least possible involvement (*ibid.*). This approach is particularly efficient in non-representational geographies, when the speech is more spontaneous. Semi-structured interviews will be chosen with less important, secondary actors

Photographic visual data will be added to this base. Photo essays can make an entire academic article in material and affect geography (Edensor *et.al.*, 2008), however it will be used in my IGS as an add-on in order to give a psychogeographic sense to the walks around the chosen site. Guy Debord, the father of Psychogeography, describes it as how a set of elements affect individuals over space, in a conscious or unconscious way (1955).

Finally, the observed hybrid assemblages will be plotted over space with analytical documentation, located oral testimonies and observations, following Jane Wollf's *Gutter to Gulf* (2009) project that is a graphic interpretation to New Orleans water infrastructure. This mapping would include point data, network data (for connections between agents) and eventually crane movements (in the form of vectors).

I am also planning on asking for an elite interview with Professor Stephen Graham (University of Newcastle), who is specialized in verticality and urban infrastructure. He would tell me about how the case of crane relates to his perception of vertical infrastructure in general, then in London.

Locations and timeline

Table 1-My IGS timeline

Date	Action
	Supervisor allocation + First meeting
April-May 2018	Complete Safety and Risk Management form
	and Low Risk ethics form
	Ask for any elite interview
Late May and late June 2018	Literature Review, preliminary visual and graphic
	work
July 2018	Data collection
September 2018	Missing data collection
	Data analysis with write-up (early draft)
October-January 2019	Dissertation write-up
28 th March 2019	Submission deadline



Figure 3-Preselected case study locations

As Figure 3 shows, I selected two urban development projects in London, Battersea Power Station being one of the largest in England, and Caxton Road/Mayes Road being of a smaller

size and less known outside its local area, but still having faced controversy from the local community (Evening Standard, 2017). Both are very accessible from where I will live this summer.

Limitations

The main kind of limitation this study might face is related to the student-interviewee power relations and biases related to any discussion-based research. As Miller et.al. (2000) suggested, the hurdles to avoid are self-fulfilling prophecies, where the interviewee's answer is positively influenced by suggestions in the questions. That will be avoided by being conscious of what a leading question is, and not to ask it. Same approach with hypothesis confirmation, where the hurdle here is a priori before having even asked anything. Another main hurdle is the accessibility to building sites and staff, that could be limited by break times and the legal context, which is why I kept September a as a 'backup month' in case July was not successful.

Expected findings

It is expected that the crane employees will reveal (consciously or not) cyborg-type relationships with the cranes in terms of movement. It can also be expected that the assemblages/networks around cranes will give the same importance to social, landscape and material actors. The whole crane imagery and discourse is likely to affect surrounding populations as if the building was already there. Another expectation is to uncover not only cranes as vantage points through which urban space can be observed, but that urban space also observes as an oppressive symbol for lower, displaced classes, and as an opportunity symbol for the 'creative' ones.

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