

# More-than-human Manchester:

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Recombination, Auras, and Dialectics in the Edges of  
Modernity



Figure 1 – View of Manchester from the Rochdale Canal.

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# Abstract

Drawing on the theories and practices of more-than-human geography, this thesis situates a critique of modernity in post-industrial Manchester. Through invoking Walter Benjamin's theoretical and practical approach to the city, it also responds to recent onto-political concerns raised about the more-than-human paradigm. Drawing on photographic and ethnographic data, this thesis both critiques and speculates about the way nature is invoked in the city. Benjamin's 'dialectical image' is deployed as a tool to disrupt prevailing uses of space and conceptions of time, and to imagine possible alternatives in urban design with non-humans. Bringing together the 'image-space' and the performative 'body-space' provides a stratigraphically rich critique and speculation of urban nature in Manchester.

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# 1 Introduction

*'[H]umanity will be prey to the anxiety of myth for so long as the phantasmagoria has a place in it'* (Benjamin 1939, p61).

Manchester's transformation from the first industrial city to the first post-industrial city has created a highly juxtapositionary urban environment, with declining Victorian infrastructure looming between new high-rises and glass buildings (Dodge et al. 2018). Throughout Victorian and contemporary restructuring, there has been an ideological underpinning of modernity through progress and innovation, to the extent that 'an appropriate index of Manchester's revival is the number of cranes that dot its skyline' (Peck and Ward 2002, p5). These modernist foundations are also reflected in academic discussion of the city's urban ecology in terms of 'ecosystem services' (for example: Armson et al. 2013, Radford and James 2013), a historically problematic concept that substantiates notions of human exceptionalism and legitimises environmental degradation (Anker 2009; Ernstson and Sörlin 2013).

This thesis endeavours to explore spaces where this idea of 'progress' is materially and spectrally embodied, and how sanctioned and unbidden flora reify and contest the spatial and temporal linearity of the city. Modes of binary thinking will be unpacked and critiqued in both analytical and methodological terms in order to bring urban ecologies into the analysis of Manchester which has for so long been dominated by cultural and economic discourses.

A grounding in more-than-human geography provides the means to illustrate hybridity between binary categories (such as human/nonhuman and organic/artificial) that have underpinned modernist ontologies and practices. There is a plethora of work on more-than-human geography (which will be explicated in chapter 2), however this has, until recently, gone uncritiqued. Eric Swyngedouw and Henrik Ernstson (2018, p4) build on this emerging critical literature to argue that certain ontological facets of more-than-human geography have led to its depoliticisation in a 'relational straitjacket'. In order to address these cogent and urgent onto-political concerns, this thesis will integrate the theories and approaches of Walter Benjamin as a polemical and speculative

intervention, both in methodological practice and analytic discussion, to harness the 'excess' of more-than-human relations (*ibid.* p20).

The thesis is structured as follows: Chapter 2 provides a conceptual overview of theories and a discussion of existing literature on urban natures. Chapter 3 explicates how the methodological assemblage was used as a performative engagement with the urban ecologies of Manchester and informs the subsequent analyses. Chapters 4 – 6 use Benjamin's notion of a dialectical image to critique and speculate about design, whilst chapter 7 interjects the analysis discussion through an encounter with a simulated nature. Chapter 8 examines the temporality of patina under the Piccadilly arches. Chapter 9 concludes the thesis by drawing together the emergent themes and arguments.

The thesis thus seeks to explore and address three research questions:

- To what extent can the urban ecology of Manchester be understood as a hybrid?
- How can complicating temporalities of the city disrupt the linearity and 'progress' narrative of modernity?
- Is the 'dialectical image' a useful tool to address onto-political concerns and re-politicise more-than-human geography?

## 2 Academic Context

### **Modernity**

Bruno Latour (1993) describes modernity as an accelerated 'new regime' (p10) that endeavours to define and distinguish the present era from an archaic past. 'Purification' is a modern practice whereby the world is separated into 'discrete ontological zones', or binaries (Meskell 2005, p6). The cardinal binaries of nature/culture and politics/science have structured imaginaries, discourses, and practices in much of western society and are particularly visible in urban change (Castree 1995; Swyngedouw 1996). Walter Benjamin's eminent work on modernity takes a historical analytic approach to the ideology as rooted in the idea of progress



and 'endless newness' (Pensky 2004, p182; Benjamin 1999). Benjamin argues that in order to uphold the 'dream-image' of society and existence, capitalist urbanism creates a 'mythical history' based on temporal linearity and rigidity that creates an ostensibly new and novel experience through 'new building forms and materials, architectural embellishments, [and] changes in design' (Pensky 2004, p183). Another facet of this 'permanent flux' is the rendering abject of objects and spaces that no longer appear new and no longer fit the phantasmagorical imagery of modernity (Felski 2000, p28). Spaces and objects of decline are hereby created as they are discarded to the 'trash of history' (Buck-Morss 1989, p93). Although not immediately synonymous, I argue that there is potency in bringing together Latour and Benjamin as two critical interlocutors to provide an ontological and historical material analysis of modernity's subjugation of nature.

One spatial proxy of the nature/culture binary is the urban/rural binary that structures the way Nature<sup>1</sup> is materially and discursively produced in cities (Hinchliffe 2007; Gunn and Owens 2006). Rural Nature is produced through the notion of an untouched and sublime 'wilderness' which Cronon (1996) argues is a cultural construction; an imaginary where human desires are projected. Maria Kaika (2005) explores the development of the city and the 'Promethean project' (p7) of modernity as a dialectical process of urbanisation and industrialisation that has materially and ideologically transformed nature to enable its control and exploitation.

### **More-than-human Geography**

Hinchliffe (2011, p398) argues that 'the latent humanism of much social science' has worked to reinforce notions of human exceptionalism (Stengers 2010) and spatial sovereignty (Washick and Wingrove 2015) which relegates the processes, actions and interactions of non-humans as existing merely to serve human interests (Whatmore 1999). However, the ontological and material 'hyper-separation' of humans and nature has not gone uncontested (Plumwood 2009, p116). 'More-than-human geography' is a radical reconceptualization of this ontological and material divide (Castree et al. 2004). Interactions, relations, intimacies and hybridisations between binary categories

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<sup>1</sup> Capitalised Nature refers to cultural constructions of it, uncapitalised nature refers to the living biological world.

are emphasised in order to contest the processes of purification (Whatmore 2002; 2006; Anderson and Toila-Kelly 2004; Braun 2005). This robust and exciting theoretical corpus endeavours 'to brush history against the grain' (Benjamin 1968, page 257 [in Badmington 2004]) by disturbing established histories and geographies of Nature and decentre the anthropocentric theories, practices and discourses that have upheld manifold hierarchies. Several key theories from the more-than-human paradigm are fundamental to this thesis.

Jane Bennett's (2010, p.vii) concept of 'vital materiality' moves beyond acknowledging the existence of intercorporeal relations, to argue for the efficacy and effective capacities of non-humans that have the power to 'alter the course of events' (p.viii). She draws on Latour's (1999) notion of an 'actant' as something that 'modif[ies] other actors' (p75) and causes things to happen through 'agency' (see Booth and Williams 2014). The notion of agency is not individualised but derives from the relations and interactions between actants (Barad 2010). Energies flow trans-corporeally as actants can affect and be affected to produce 'capacities and powers that enhance their own' (Hinchliffe and Whatmore 2006, p135). Thus, the relational ontological approach argues realities are unstable and derived from association (Bakker and Bridge 2006). Whilst useful in de-hierarchising western thought, critics have argued that this relational ontology 'does not allow for a . . . constitutive outside' (Swyngedouw and Ernstson 2018, p4). The denial of 'excessiveness' (*ibid.*) in these relational configurations of fluidity and contingency renders them vulnerable to co-option by an expanding capitalism unless there is an intentional grappling with excess and volatility to contest the hegemonic order (Braun 2013).

Tim Edensor (2011) situates the theories of vital materiality and agency theories at the site of St. Ann's Church in central Manchester, emphasising the relationalities between different actants across categories through the Deleuzian concept of the 'assemblage'. The assemblage is a multiplicity of several heterogeneous actants (the 'actual') and the unstable (forming and rupturing) relations between them (the 'virtual') that gives rise to a particular reality (Deleuze and Guattari 1987, p99). Heterogeneity, rupture and fluidity mean the assemblage is not a teleological analytical approach but rather an emphasis on the processual and emergent character of things and places. It highlights the instability and non-linearity of materials that hold interminable

possibilities for becoming (Farías 2010; May 2005). Deleuze and Guattari's notion of the 'rhizome' emphasises the conditions of being that exist beyond the actants enrolled in the immediate assemblage; the different scales of transformation through different material and conceptual networks enables a greater scope of analysis and also allows the assemblage to enter 'new circles of convergence' beyond the initial line of enquiry (Deleuze and Guattari 1987, p11). Lorimer (2008) grounds brownfield conservation in Deleuzian theory, arguing for a relational approach that emphasises emergence, hybridity and fluidity to encourage a more resilient and non-hierarchical approach to urban nature.

### **Situating more-than-humans**

The relational geographical approach to the city (Jacobs 2012) and to urban nature (Rocheleau and Roth 2007) is central to more-than-human geography and can be reflected through the ethical notion of a 'politics of conviviality' where nonhumans are not regarded as 'out of place' in the city (Hinchliffe and Whatmore 2006), not persecuted, and human-nonhuman interactions are unmediated by capital (Wolch 1996). Research into more-than-human assemblages and non-human agency has however mostly focused on 'stable, coherent, and large mammals' (Lorimer and Davies 2010, p32) rather than more mundane or uncharismatic non-humans such as plants, myopically refiguring ontologies in terms of similarity (Stark 2015) (for example, see: van Dooren and Bird Rose 2012; Whatmore 2002; Cohen 2015; Wissenburg and Schlosberg 2014; Pearson 2015. An exception to this prevailing pattern can be seen in Àvila and Ernstson 2019).

Although less burgeoning, there is an emergent body of literature attending to 'plant agencies' (Brice 2014). Head et al. (2014) argue for a 'vegetative cosmopolitanism' that foregrounds the co-construction of landscape between humans and plants. Mabey (2010) notes how plants that overgrow or transcend certain spatial boundaries become discursively produced as out of place, but thus hold the potential for a contestation of urban spatial relations. Pellegrini and Baudry (2014) argue that these transgressions by 'unbidden flora' produce certain forms of urban space, and vegetation can be enrolled by formal and informal actors to 'prevent specific [human] behaviours' (p887). Other scholars more directly implicate human embodiments, for

instance Poe et al. (2014) document how ‘relational ecologies of belonging’ (p914) can be fostered through group practices of foraging, with plants as active participants in the constitution of identity, place and social life. Tsing (2015) takes a similar ethico-political approach to mushroom foraging but provides a more manifest delve into mushroom and multispecies growth in the ruins of modernity, whilst decentring the human as beneficiary, or object of study; a shift that aforementioned scholars neglect. Present in all of these, however, is a certain form of humanist narrativity that selectively invokes ‘key actors, agents, props and relations’ (Swyngedouw and Ernstson 2018, p7). This imposes humanist tropes and denies a more radical politics of excess.

### **Recombination and the Edge**

DeSilvey (2017) and Edensor (2005) have examined how decaying structures afford entropy to non-humans to produce new hybrid or ‘recombinant’ ecologies through entangled organic and inorganic relational agencies (Barker 2000). Urban ecosystems must be addressed and understood as creative fusions of materials, spaces and species rather than as ‘out of place’ (van Dooren and Bird Rose 2012, p2; Rotherham 2017). The ‘edge’ is a conceptual and material spatialisation of the aforementioned concepts. It describes the interface of two different environments where a specific set of ecological effects and conditions induces high levels of species richness and difference (Didham et al. 1998; Laurance et al. 2007). The concept is predominantly deployed in science-based ecology however has also been used to analyse Indigenous cultural edges as sites of ecological knowledge exchange (Turner et al. 2003). Vanni (2016, p1) has outlined the notion of the ‘transcultural edge’ as a site for diverse ecological and cultural exchange and hybridisation. Despite the sparse literature that engages the notion of the (more-than-human) edge, I will invoke it in this thesis as a crucial conceptual and spatial framework through which ecological and ontological hybridity and emergence can be analysed (Crosby et al. 2014).

Situating the ‘edge’ in the urban environment of Manchester reifies the spaces where certain binaries of modernity come together in contradictory relationships to produce something that exceeds a restricted relational ontology (see figure 2). Benjaminian theory will afford a dialectical mode of analysis, framing the edge as a space of

recombinance, agonistic encounter, and speculative critique (Benjamin 1968; Schinkel 2015).

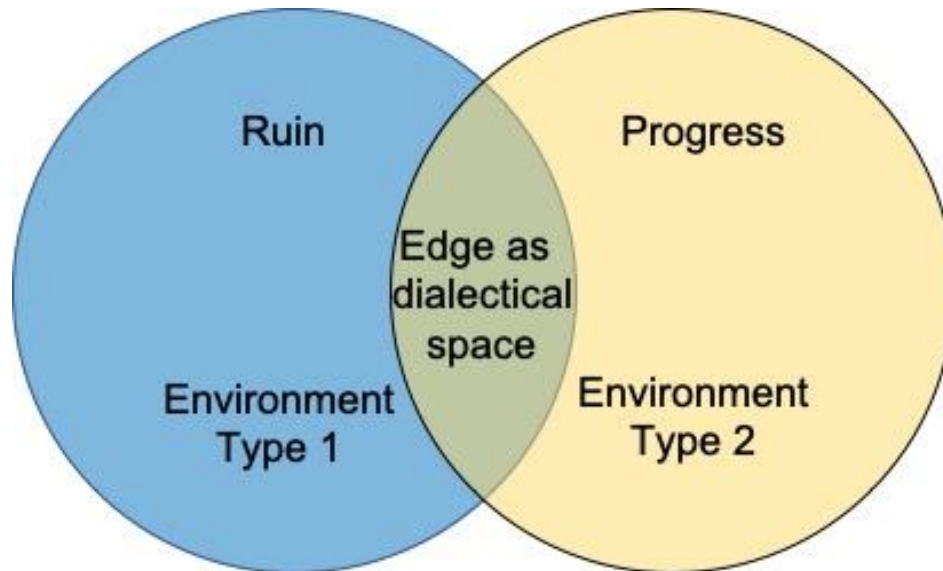


Figure 2 – Visualisation of the spatial and conceptual edge space.

The broad theoretical corpus explicated in this literature will now be used to inform and outline the more-than-human methodological assemblage.

### 3 A more-than-human methodology

*‘(There) is the urgent need to supplement the familiar repertoire of humanist methods that rely on generating talk and text with experimental practices that amplify other sensory, bodily and affective registers and extend the company and modality of what constitutes a research subject’ (Whatmore 2006, p607).*

#### **Ethics and Response-ability**

The relational approach adopted in this thesis extends to the ethical and political underpinnings of the methodology. A humanist notion of ethics regards human responsibility as *for* the other, where a moralising discourse and action *on* non-human others sees humans as either disturbing or protecting that which is encountered (Barad 2007). Instead, I will adopt the ethico-political approach of ‘response-ability’

(Thiele 2014, p213) which turns to 'difference' not as a binary structuring of separation, but as an entangling and hybridising of different actors in the generation of agency (Manning 2016). Ethics is thus conceived as a trans-material political force where difference comes together in hybrid forms to create new knowledges and disrupt hierarchies.

## **Ontological Considerations**

The key methodological task for disrupting binary modes of thinking is how to avoid a politics of inclusion (a simple boundary-blurring or equation of human/nonhuman), and how to engage with the 'excess' beyond relations (Springgay and Truman 2018; Swynedouw and Ernstson 2018). A politics of inclusion underpins this paradox of enquiry: how, in the pursuit of decentring the human from study, can nonhuman agency be realised and voiced 'without interposing more of ourselves in the picture' (Head and Atchison 2009, p241). Human representation of nonhumans assumes that nonhumans exist to be represented and that value lies in the ability of humans to quantify presence or absence. This scientific tradition of complete representation is grounded in ideas and practices of human exceptionalism (Hinchliffe et al. 2005).

In this light, this methodology engages with a set of tactics that endeavour to '[generate] friction and leakage' between different categories and transcend boundaries and demarcations to elucidate and form new relationalities *beyond* existing relational configurations (Luciano and Chen 2015, p186). Bennett (2010) contends that new 'regimes of perception' must be devised in order to 'consult nonhumans more closely, or to listen and respond more carefully to their outbreaks, objections, testimonies and propositions' (p108). I employed several 'sensitising devices' during the fieldwork for this research (Hinchliffe et al. 2005, p648). These tools helped me develop new sensory ways of being in the landscape and attending to nonhumans.

## **Sensitising Devices**

### *The Wild Flower Key*

The first sensitising device was a field-guide called 'The Wild flower key: A guide to plant identification in the field, with and without flowers: over 1400 species' by Francis Rose (2006). I took my copy of the book to the study sites, aiming to identify species

with it. The field guide, Hinchliffe et al. (2005) argue, is something that writes ‘around rather than write[s] up’ (p648) due to the deep description and analysis of different plant species. I would contend, however, that field guides abstract plants from their relational contexts, firstly by placing them in taxonomic classifications and secondly by visually depicting them as discrete entities on the page (see figure 3). This unsituated ecological representation particularly overlooks the urban context where plants emerge in novel ecosystems and recombinant ecologies (Situated Ecologies n.d.). Whilst the content of the book is essentially non-relational, it became an actant in the broader ‘methodological assemblage’ as its relations with other sensitising devices brought forth efficacy and agency as it ‘alter[ed] the course of events’ (Bennett 2010, p.viii; Latour 1993).



Figure 3 – Rose’s (2006) *Wild Flower Key*.

### Smartphone Camera

The smartphone was particularly useful in this context of a vernacular, mobile engagement with the urban landscape (Heng 2017). I collected photographic data over four days in November 2018 and two days in February 2019, compiling over 400

photos. Zylinska (2017) outlines the notion of a ‘posthumanist philosophy of photography, anchored in . . . “the nonhuman turn”’ (p3) that breaks with traditional humanist modes of photography as either art or sociological practice. I deliberately engaged with the panoramic gaze of the city, photographing the skyline and vertiginous, sublime urban landscapes (Jansson and Lagerkvist 2009), however I also adopted Zylinska’s notion of ‘looking-with’ (p20), where mundane yet intimate relations between nonhumans were captured. This reified my ethico-political position through a trans-material engagement with both organic and inorganic nonhumans (plants and the camera respectively). Lorimer (2015) argues that integrating technology with human senses is a way of expanding the human *umwelt* or capacity to perceive nonhumans, and interacting with the camera as *an agentic nonhuman* is necessary to reveal other nonhuman agencies. Similarly, Benjamin argued that deploying technology is a means to change one’s experience and understanding of modernity through the dissection of urban space (Benjamin 1968). Smartphone photography was deployed to capture both more-than-human landscapes, but also as a tool to realise agency in its relational configurations (Barad 2007) – both in the more-than-human landscape and in the methodological assemblage along with myself, the field-guide and the landscape.

### *The Deep Map – Unrealised Cartographies*

I started to produce a ‘deep map’ of Manchester – a relational artefact mapping historical documents and narratives with contemporary photographs and reflections to create a rich depiction of place<sup>2</sup>. However I abandoned this pursuit as the map became a site that created ostensible and human-centric infinite vision, or, what Haraway (1988, p581) calls the ‘god trick of seeing everything from nowhere’. Instead, smartphone photography and the formation of dialectical images seemed a more appropriate way to situate and negotiate knowledges and ecologies in Manchester. The map was not, however, entirely futile, as the effort put into its production became another mode of sensitising myself to the environment. I georeferenced the 1848 OS map in ArcMap through a series of ‘link’ points (see figure 4). This process created a series of disruptive feelings – or uncanny encounters – when navigating the maps to

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<sup>2</sup> A pilot version is available at <http://bit.ly/2TBpAfa>



find corresponding geolocations across different temporal map-spaces. The process helped attune me to what is has been made invisible in the contemporary city.

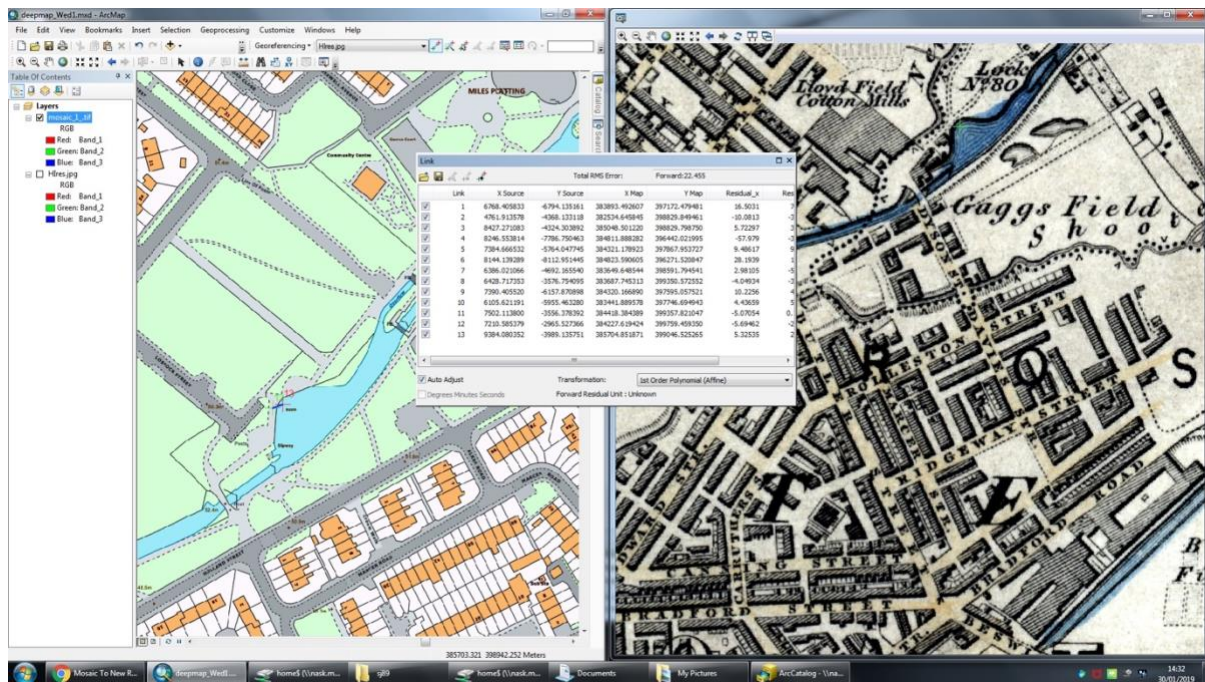


Figure 4 – georeferencing in ArcMap.

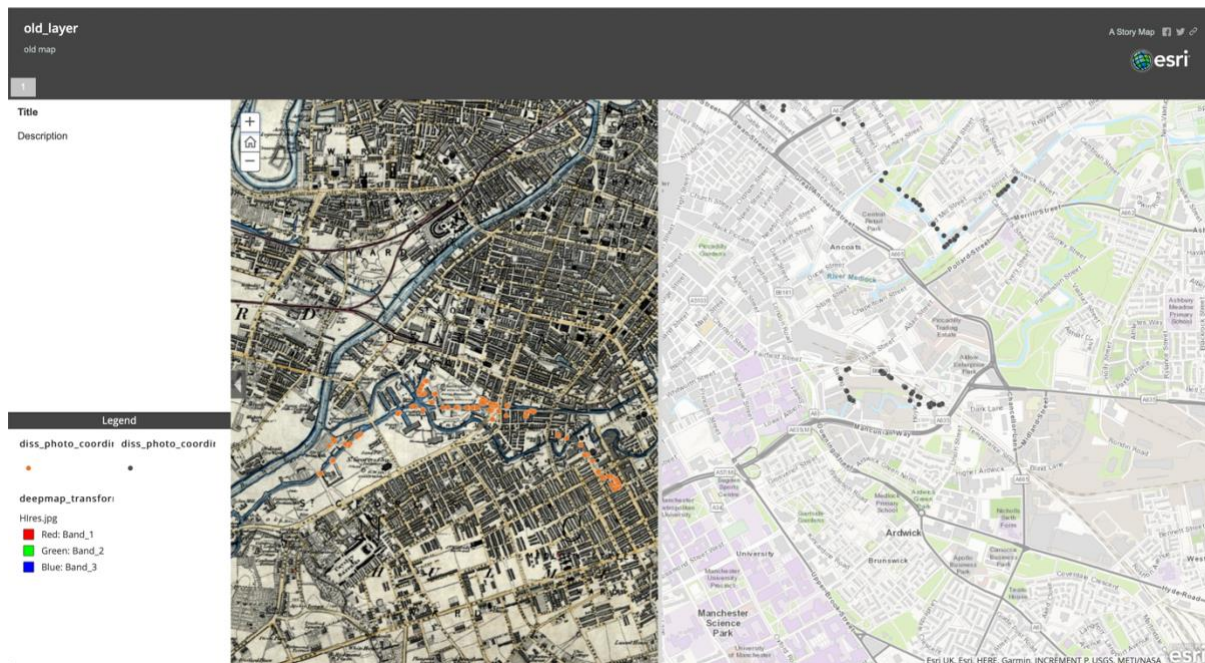


Figure 5 – pilot deep map.

## Walking-with

More-than-human geography advocates a departure from the human as central or sovereign in fieldwork and enquiry. However the presence and intervention of my own humanness cannot be ignored. In order to ameliorate this, a methodological 'with' was adopted as an approach to photography and moving through the landscape (Neimanis 2012). Haraway (2008) notes this '*with* . . . demands work, speculative invention, and ontological risks' (p83) (emphasis added). My own body as emplaced and mobile in the landscape ultimately underpinned the collection of data. Walking was not used as a teleological practice of getting from A to B, but as an 'entangled, transmaterial, affective practice of experimentation' that generated an attendance to presences, absences and spectral traces of nonhumans (Springgay and Truman 2018, p142). I walked *with* nonhumans – with the book, the camera, and the nonhumans in the environment – and followed visible and spectral traces of urban flora which led me to transverse prescribed lines of movement and experience an unfamiliar experience of walking no longer guided by 'sequential routes' (Edensor 2008, p127; Harney and Moten 2013). Instead this ethico-political mode of walking realised agency through new encounters between the actants in the methodological assemblage and alluded to the notion of 'hapticality' – a 'relational touching' instigated by movement that engendered a receptiveness to the environment and its differences and frictions (Springgay and Truman 2018, p42).

Deploying these sensitising devices helped me 'learn to be affected' during my fieldwork, as sensory attentiveness to and with flora developed (Latour 2004, p205). Investigating these mundane plants like 'weeds', mosses and buddleia, is what Walter Benjamin would have described as a 'profane illumination' (Benjamin 2006a p132) – a mode of experience induced by encounters of alterity with mundane objects and spaces in the city to create disorientation. Through the disorientation I came to see the multiplicity of relations that exist between bodies and across temporalities (Auerbach 2007). This approach of being led *by* nonhuman bodies, allowed me to illuminate the 'edge' spaces in the study areas – those which involve a dialectical tension between categories or processes.

## The Dialectical Image

Walter Benjamin's methodological approach to critiquing modernity and the urban phantasmagoria was through 'counterimages that rubbed harshly against the grain of the semantics of progress' (Buck-Morss 1989, p92). The *dialectical image* is a juxtapositionary amalgamation of fragments of the city discarded by modernity and the ceaseless march of progress. It is a means by which I contested the dominant historicism of the city by collapsing the past and future, valorised and abject, into one image-space to produce an artistic historiography that re-wrote history in speculative configurations (Benjamin 1968).

Although Benjamin's conception of the dialectical image is dominantly through literary critique, Habermas (1985) argues that his work is open to interpretation and so one 'should not confront it with facile demands for consistence' (p130). Thus, using the images collected and affective encounters experienced, I formulated a series of dialectical image collages using Adobe Photoshop (see figures 9, 15 and 19).

I would briefly like to justify the abstinence from coding images. Coding images can be read as a 'method of control' that demarcates and compartmentalises the world in discrete categories (Denzin and Giardina 2008, p182; Wilmott 2016). To code would be an inherently modern practice of reinforcing binaries and processes of purification (Latour 1993). This exertion of humanism would not reflect the non-hierarchical and ethico-political approach this thesis takes to research and the city.

I cropped fragments such as cracks, mosses and unbidden plants out of my photographs and overlaid them onto photos of sublime landscapes. The opacity of overlaid fragments was reduced to create a sort of 'absent-presence' (Edensor 2008, p324) of the speculatively rearranged fragments; a series of spectral traces which progress has endeavoured to banish but which are now emerging as enlivened and politicised in more-than-human material assemblages and in the dialectical image-space (Benjamin 1968). The dialectical image was also a means to harness the excess of relations through speculative rearrangement of matter. Benjamin's concept of critique that lies in the dialectical image coalesces 'excess into the experience of the present' (Caygill 2005, p71) and is politically charged in the sense that it 'maps the

way toward a certain attunement of a world and expression' by choosing to follow and arrange a particular constellation (Manning 2016, p45).

This unique combination of methods provides an insight into the way artistic practice can be read as critical, engaging in speculative and disruptive ways with the landscape (Hawkins 2013).

## **Areas of Study**

Several sites around central Manchester were chosen as sites of study (see figure 6):

- Castlefield is an area to the south-west of the centre, emblematic of the post-industrial transformation that has defined contemporary Manchester (Madgin 2010). I investigated the First Street redevelopment as a place of ongoing renovation and conspicuous consumption to seek the different ways in which nature is enrolled in urban design and how this can be subverted.
- The Green Quarter is in Northern central Manchester and is home to both Victorian railway infrastructure and newly developed luxury flats. The highly juxtapositionary landscape also contains the culvert of the River Irk beneath the city; the Green Quarter embodies the triumph of 'high technology' over 'low nature' (Dobraszczyk 2017, p68). My methodological 'walking-with' led me beyond the Green Quarter, following spectral traces of the River Irk to Cathedral Gardens.
- The viaducts that bring trains in and out of Manchester Piccadilly are Victorian-era constructions and can be described as the 'infrastructural sublime' (Dodge 2012, n.p). Largely untouched by contemporary regeneration, I investigated the interactions of non-humans with the damp and dark environment beneath the arches.



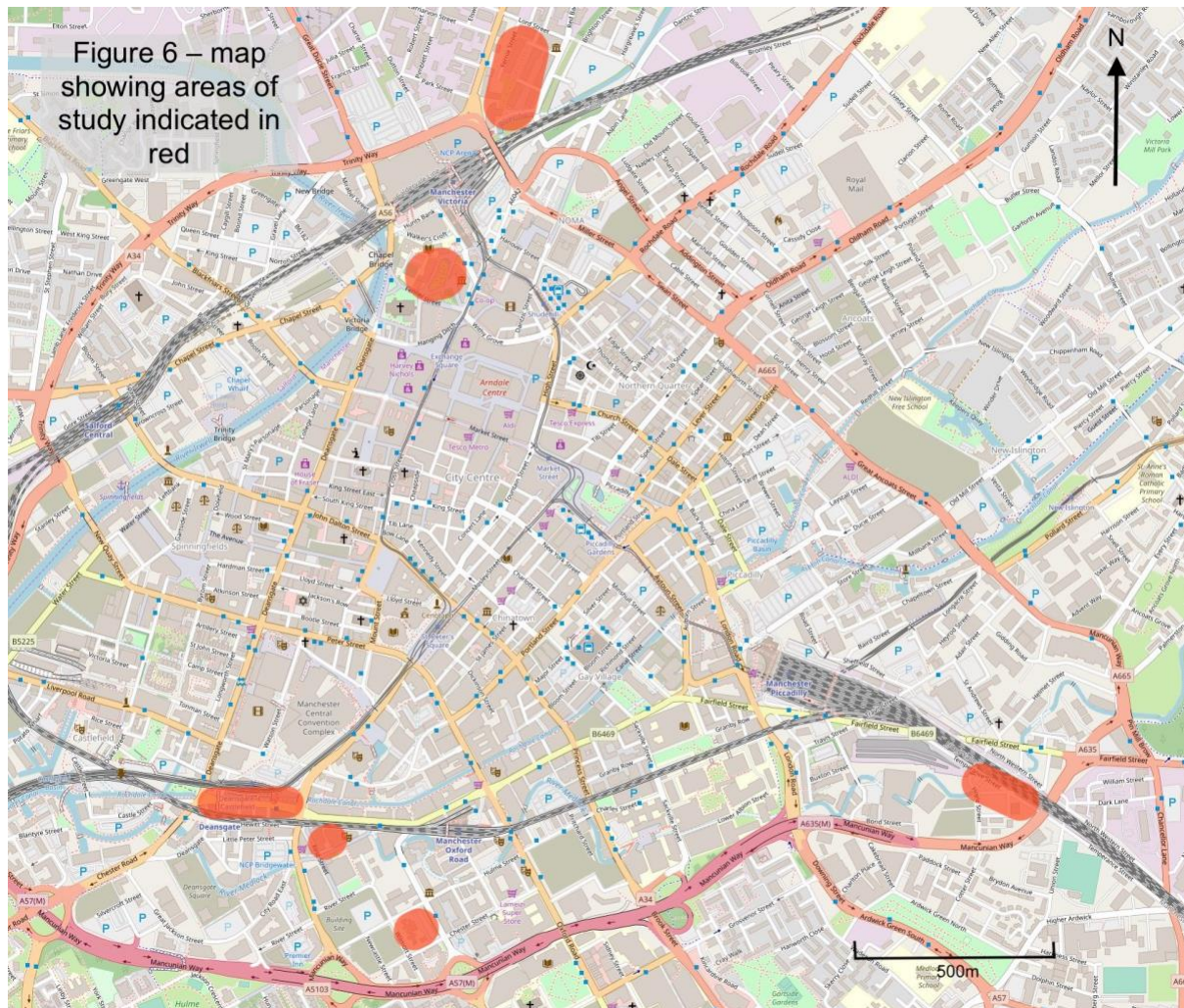


Figure 6 – Map showing areas of study (indicated in red) (Adapted from OpenStreetMap Contributors 2019).

The areas chosen host different spatial characteristics (striated, juxtapositionary and sublime) where different edges can be found, and thus different dialectics explored. These sites also have different architectural forms for the intended socio-spatial use (consumption/dwelling/mobility), within each of which can be found dream like qualities; of commodity, luxury, and travel (Buck-Morss 1989). Within these phantasmagorical spaces lie surfaces and landscapes ripe for critique, disruption and speculation using the creative mixed-methodological approach.

#### 4 The Lively Mundane

I turn off Oxford Road just after the Mancunian Way and navigate to the start of the First Street regeneration area. A 'key node' between the Civic Quarter and the

'knowledge industry . . . of Corridor Manchester', First Street has been undergoing redevelopment since 2010 (Deloitte 2018, p5). A mix of renovated warehouses and 'pseudomodernist architecture' (Hatherley 2010, p.xxi) surround a vacant lot with crumbling walls and a few tent dwellers (see figure 7). To the left, a wall invites me to 'LIVE AT FIRST STREET. A GREAT NEW NEIGHBOURHOOD' where 'WORK ENDS. LIFE CARRIES ON'. Although tempting, I instead turn to the vacant lot, the interruptive space amidst the vertiginous buildings.

Walking-with the flora leads me to a wall that divides this vacant space from the neighbouring carpark. Here lies (figure 8):

- A fallen redbrick wall
- A mattress
- A buddleia bush
- Plastic and metal barriers
- Plastic bottles
- A backgammon board



Figure 7 – the vacant lot of First Street Redevelopment.





Figure 8 – the buddleia-brick assemblage.

These materials indicate a previous (perhaps intimate) relation with humans. Now they are dirt, or litter, in the sense that they are out of place (Douglas 1966). But these materials now exceed human activity and meaning in their curious and contingent arrangement that evokes in me a sense of surprise. The buddleia does not exist as it does in the Wild Flower Key as ‘sepals 4 fused into a tube; 4 corolla-lobes and 4 stamens with a 2 celled superior ovary’ (Rose 2006, p389) but instead in a vital material assemblage: the organic situated with a multiplicity of inorganic actants (Bennett 2010).

The crumbling wall and discarded personal artefacts signify this lot as a neglected space of decline, left to crumble by what Benjamin (1968) called the storm of progress. His allegorical metaphor for the process of modernity is through the ‘angel of history’ that looks towards the past with wings of hubris open and blown by the ‘storm of paradise . . . into the future to which his back is turned while the pile of debris before him grows skyward’ (Benjamin 1968, p258). Similar here is the idea of creative

destruction (Harvey 2007) wreaked by the relentless drive for newness which rapidly rejects materials and spaces of a previous era to render them abject.

The decay of the wall and generation of rubble is entangled with the agency of the buddleia as it establishes and sprouts within the cracks, the two processes in an idiosyncratic co-emergence. Neither the wall nor the buddleia can be delineated or bestowed a particular function as either natural or cultural artefacts but rather exist as a hybrid that 'disaggregate[s] wholeness' (Edensor 2005, p114; Latour 1993). Their escape from human subjugation allows new relations and resituation in a novel assemblage, where entropic potential increases as the bodies are reconfigured in a particular novel assemblage where 'everything mutates. . . what has been forgotten mingles with other forms' (Yaeger 2003, p112). The boundaries that maintain the buddleia as 'natural' and the brick as 'cultural' diminish and a material natureculture emerges (Haraway 2003).

As these mundane bodies are rendered obsolete and discarded, they enter a new existence outside direct human intervention by accumulating as a pile of debris. Encountering this 'debris' with a profane illumination instead poses them as relics of a recent yet seemingly distant past; materials once bestowed with revered and fetishised status that are quickly replaced by something newer that then renders them obsolete, a process that creates 'extreme temporal attenuation' of material existence (Buck-Morss 1989, p97). The mattress now rendered waste was once rendered progress as a new intimate commodity. Foregrounding these relics illustrates the transiency of material valorisation.

The contradiction of progress and decline is present, rendering the vacant lot an 'edge'. The surrounding landscape of 'progress' and the historical attendance to the objects once rendered 'progress' reveals that decline and decay in fact exist dialectically within modernity (Buck-Morss 1989). Without the dual process of 'progress' and decline there would be no lively assemblage.

The assemblage (figure 8) is curious in temporal and material form. Deleuze and Guattari's (1987) figure of the rhizome can be enrolled as a conceptual mode of enquiry into relations that exceed the brick and the plant. Historical processes of



capitalist industrialisation played a role in creating the wall as a means by which to organise space in the particular form of housing (Parkinson-Bailey 2000). Buddleia, 'native' to China, was imported into Europe in 1869 along imperial trade routes (Owen and Whiteway 1980). More recent processes of urban deindustrialisation and entrepreneurial redevelopment are also enrolled in the emergence of the assemblage as the space and materials were neglected and human resources channelled into other (lucrative) spatial forms. Tracing these histories is following the rhizome. It enables us to 'map the oscillating network of transversal connections' (Stark 2015, p186) between contemporary and historical material bodies and processes to explain the emergence of the assemblage. It is also a tool by which the dialectical image can be constellated.

My profane illumination, inspired through 'walking-with' nonhumans, has reified relations both within and in excess of the buddleia-brick assemblage as pasts and presents are enlivened. Attending to Benjamin's critique of history-as-progress requires speculative and fantastical re-imaginings of these relations, disrupting and detaching bodies from previous networks of meanings and into speculative constellations (Benjamin 1968; Edensor 2005). Dialectical image 1 (see figure 9) 'follow[s] the rhizome' (Deleuze and Guattari 1987, p11) of the discarded objects in their assemblage formations to disrupt the assigned purposes and functions of the buildings that punctuate Manchester's skyline (Mellor 2002).



Figure 9 – dialectical image 1.

Speculating beyond the ‘actual’ difference between bodies enrolled in the assemblage points towards the Deleuzean notion of the ‘virtual’, or the mapping of potential difference that exceeds the containment of the current relational structure (Deleuze 1968). The idiosyncratic organisation of the mundane materials in the vacant lot has created the conditions for new configurations; new relations between the materials but with different directions. These intensities, or potentialities, that exist between the actants can emerge as the relations within the buddleia-brick assemblage follow new ‘lines of flight’, new configurations of alternative possibilities, in the direction of the dialectical image (Deleuze and Guattari 1987, p311). A series of material contrasts with Manchester’s skyline positions the natureculture assemblages beyond the limits of the real and into the realm of the virtual. The juxtaposition of the Beetham Tower’s material rigidity with the emergent properties of the natureculture assemblage simultaneously creates disruption and construction (Bohn 2019). The materiality of progress is disrupted by enrolling the multiple historical conditions of the assemblage into the image to produce what Benjamin refers to as a ‘constellation’ – an alternative

historiography of Manchester's skyline where the past is explicitly articulated in the present and relations between objects are radically re-arranged (Benjamin 2006b p93). The brickwork which was once rendered progress but is now in a state of decline is assembled into the glass and steel of the Beetham Tower to illustrate its impending fate as one of 'the monuments that were [once] built to signify the immortality of civilisation' (Buck-Morss 1989, p170). Through the dual articulation of disruption and construction, 'now-time' emerges: a disruptive moment that articulates the past in the present and creates a distinct and radical historiography separate 'from the continuum of history' (Bohn 2019, p3).

The urban form of modernity is the promise of a city without cracks. However cracks are omnipresent in this vacant lot space. Gordillo (2014, p127) notes that cracks are spaces 'torn apart by contradictions' to reveal their composition. The contradiction here can be posited as the dialectic of stability/instability that becomes manifest in fracturing the ground and creating an edge space both in the sense of a dialectical convergence and as a locale of ecological flourishing. Once established, the mosses and small shrubs encroach on the 'stable' concrete assemblage, intra-acting by amalgamating resources. The mosses and concrete as both are disturbed as purely natural or artificial, continuously emerging through new intra-actions and relations. Emplacing the cracks onto the other skyscrapers is a tactic to disrupt the assumed material stability of the building by creating metaphorical cracks in the material symbols of progress, enabling speculation about the process of composition and the promises of modernity. Elucidating the edge here, not as an indeterminate space, but as an edge of hybridity and negotiation, brings the space out of the scrapheap and enlivens it as a space composed of multiple agencies sustaining alternative forms of urban vegetation.

## 5 Un-taming the Uncanny

I continue walking towards the completed phase of the First Street regeneration. There are no ruins here, but instead a 'striated space' of order and cleanliness (Deleuze and Guattari 1987, p479). Here I encounter (see figure 10):

A Resi-Grille Tree Grille System



## An Arborraft Urban Tree Planting System

Several leafless (and thus unidentifiable) trees



Figure 10 – tree-grille at First Street.

Disposal and invisibility are urban design tactics ‘fundamental to ordering the self’ (Hawkins and Muecke 2003, p.xiii) and ‘[maintaining] spatial purity’ (Edensor 2005, p108). Matter out of place is systematically relegated from hyper-controlled public spaces like this, as its agency can act as a volatile and disorderly force that threatens systems of purity and regimes of purification (Latour 1993, Douglas 1966).

The 'Green-Tech' urban trees (figure 10) are a stark materialisation of the natural/artificial binary, as the tree suddenly disappears into subterranean space and the root network is obscured from direct view. Pellegrini and Baudry (2014) note that these covered tree pits enable air and water to penetrate the roots whilst preventing other plants from growing. This also allows high pressure cleaning of the street to remove mosses and lichens. Manifest in this space is what Maria Kaika (2005) calls the 'schizophrenic attitude' towards nature in the city. As Nature is invoked as a landscaping design *service*, it is simultaneously positioned as a 'pure' entity enrolled into a broader spatial narrative of sanitisation, and as an untamed wildness that demands control through the planting system that constricts root growth and thus prevents protuberance in the paving (Green-Tech 2019).

I walk out of the First Street redevelopment, following the (sometimes spectral) presences of flora (both unbidden and sanctioned). Soon I encounter the Rochdale Canal. Opened in 1804 and once an astir waterway central to Manchester's industrial era, the canal now lies amidst a surge of redevelopments and the bars of Deansgate Lock (see figure 11).





Figure 11 – the Rochdale Canal at Deansgate.

I encounter a wall next to the canal covered with moss (see figure 12) – a recombinant ecological assemblage. The moss is actively participating in urban space, growing with the hard surface of the rock and absorbing air pollution from the nearby road (Gabrys 2012). The moss has a rhizomatic structure and a non-linear ecological vitality central to its emergence as a pioneer species. It expands non-linearly like Deleuze and Guattari's conceptual mode of enquiry. The substrate, stone, is itself an assemblage of different minerals and rock types deployed as a stabilising agent to structure space (Edensor 2011). Relations within the stone, between the different actants (minerals), are not fixed but are vulnerable to the rhizomatic properties of the moss, Manchester's

variable climate, and historical and contemporary air pollution. The moss-stone assemblage here enters 'relations of exteriority' with other assemblages, for example the sulfuric acid present in rain that can disrupt the actant of calcium carbonate within the stone assemblage (DeLanda 2006, p11). Disruption of a particular actant in the stone assemblage can create further material cracks, where biofilms and mosses can penetrate and spread, co-emerging and flourishing with the geological deterioration of stone and the fluctuating climate (Smith and Prikryl 2007). This 'congealing of agency' (Barad 2007, p210) creates an instability in the apparently fixed material of stone as it becomes-with the moss, the existence of both fundamentally rooted in their interrelations (Deleuze and Guattari 1987). To avoid reinforcing the binary between 'intellectual understanding' and 'sensory appreciation' (Tuan 1989, p233), my methodological assemblage enables a haptic engagement with this surface:

*'The virescent layer of moss is still wet from the morning dew. From afar, and through the lens of my camera, it appeared to be softly vibrating, animating the brick wall with which it dwells. As I move my hand along its surface I can feel the rigidity and rootedness of this soft but strong interface' (field diary 10<sup>th</sup> November 2018).*





Figure 12 – the canal-side mossy wall.





Figure 13 – canal-side wall – a zone of exchange.

The surface is here an edge, a zone of exchange between the natural and the cultural to produce something which exceeds both (Forsyth et al. 2013) (see figure 13). My haptic engagement is a visceral enquiry into the edge beyond a textual-intellectual depiction. I am contesting the normative and prescribed engagement with nature in the city as one which is mediated or distant, delivered in a spatially dichotomous form such as the trees along First Street. The 'line' (Harney and Moten 2013) is that along which the controlled and measured rhythms of being in the city are practiced. My haptic engagement is an alternative rhythm that transverses the line, encountering the soft mossy surfaces and coarser friction on the stone as I engage in 'skin talk' with the ecological assemblage (Harney and Moten 2013, p98). My touch is received and returned as the moss bounces back, creating an affective 'hapticality' as I feel the moss feel me, a form of nonhuman reciprocity (*ibid.*; Benjamin 1968).

My encounter with the wall is an 'affective ecology' – an everyday engagement with the city that transverses prescribed encounters with nature (Àvila and Ernstson 2019,

n.p.). The wall, and perhaps more broadly the city, becomes a site for performativity, a transgression of cognisance or (adequate) narrative reproduction as agency is redistributed through a new way of being, moving, touching (in) the city. Through this hapticality, I engage in 'response-ability' as an ethical and political practice, a mutual exchange of vibrancy and attention that produces an agential excess beyond prescribed material uses and practices in the city (Thiele 2014).

I cross the bridge over the Rochdale Canal and encounter an unbidden green wall. A leaking drainpipe on the railway arch is engulfed by climbing ivy that has taken root in the Victorian red brick (see figure 14). The progress narrative of modernity regards the city in a state of 'perfect order, completeness . . . and internal homogeneity rather than leaky, partial and heterogeneous' (Graham and Thrift 2007, p10). However, the decay of the drainpipe enables seepage, both of water and ontological boundedness, as the two leak and splashback on the wall. The decaying infrastructure of the Victorian railway can be read as a Deleuzean 'becoming' – the old infrastructure is becoming-plant as the proximity 'produces a shared deterritorialization' (Deleuze and Guattari 1987, p293). Both the ivy and the drainpipe become liberated from their previously distinct and material boundedness in a recombinant ecological assemblage. The drainpipe and the ivy both take on new roles in terms of ecological sustenance (the leaking pipe providing water for the ivy to grow) and in terms of structure (we may speculate that the entanglement is providing structural organic buttress for the otherwise 'decaying' drainpipe). As what Latour would call a 'hybrid' (1993, p3), the functional affordance of the assemblage now exceeds the significance of each actant's previous identity (a mode of drainage and an 'invasive plant pest' [M. Clarke et al. 2006, p149]) to produce a lively recombinant ecology (Stark 2015).





Figure 14 – ivy climbing a leaking drainpipe.

The two recombinant ecologies of the moss and the ivy exist as edges where ecological hybridity and becoming develop two dialectical relationships.



Order/disorder and volatility/stability are negotiated by the entropic and rhizomatic emergence of the assemblages which are neither ordered nor disordered, volatile nor stable. They occupy somewhere in-between and cannot be consigned to one or the other category due to the complex relational and excessive transformation of both material and place. The categories of space in terms of disorder to be ordered, or volatility to be stabilised, are human constructions that inform the spatial transformation and maintenance of materials in the First Street redevelopment. Complex nonhuman relational enfolding in the edges of ecology and modernity thus contest the exertion of human spatial control (Hinchliffe and Whatmore 2006). Dialectical image 2 is a disruption of the material stability of the First Street redevelopment.

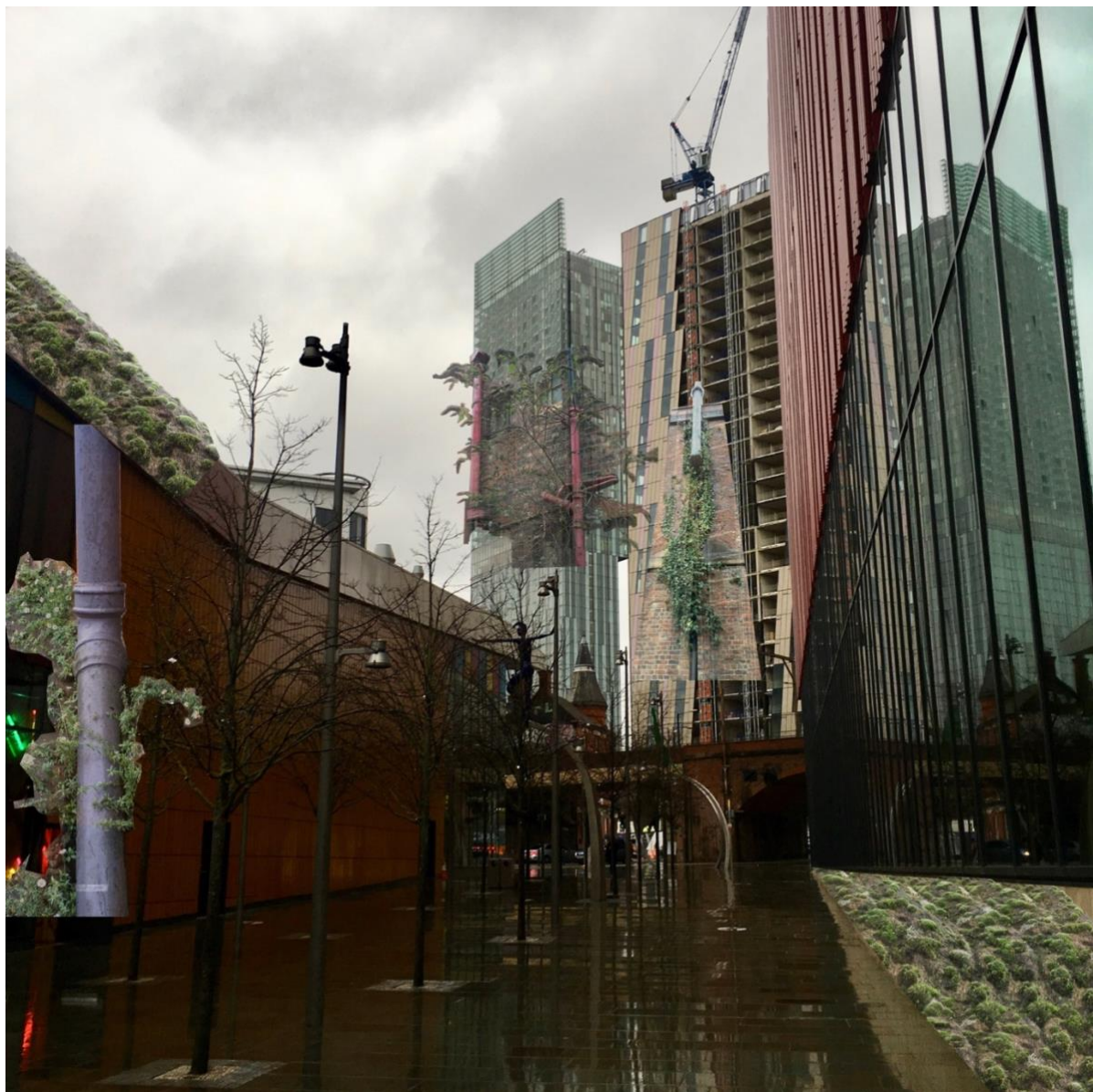


Figure 15 – dialectical image 2.

The affective ecologies of the mossy stone encountered make up the walls of First Street in dialectical image 2. We may speculate the potential for mosses to be incorporated into urban design or landscaping based on the 'diverse agencies and rhythms of nonhumans' which Lorimer (2008, p2057) argues has significant ecological and onto-political implications. Foregrounding and incorporating non-charismatic yet tenacious flora such as mosses can address concerns over lack of the affective and performative facets of a relational more-than-human geography through haptic and quotidian ecological engagement (Ernstson and Swyngedouw 2018). The dialectical image deterritorializes different actants through conceptual and ecological hybridisation, illustrating the political significance of reconceptualising urbanism in terms of contingency and entropy that diverges from prescribed spatial forms.

Additionally, infrastructures of historical buildings are emplaced onto the structures of the Beetham Tower and a building under construction, rendering visible the 'flesh' and 'guts' of decaying structural forms (Edensor 2005, p109-110). Kaika (2005) notes how contemporary design and architecture endeavour to absent networks and infrastructures that transform and mediate nature in the city, as once they start to decline, they signify the fragility of progress and the 'rusting . . . modern urban dream of emancipation and equality' (Kaika 2005, p44). Dialectical image 2 subverts this ideological hydrophobia that co-emerged with the domestication and privatisation of water by rendering visible the socionatural process of drainage (Kaika and Swyngedouw 2000). In a moment of resurgence, the presence of the absented drainpipes creates an uncanny encounter with the abject materials and processes enrolled yet concealed in the constitution of the city, and the loss of the urban sublime becomes palpable.

Through this evocation of the uncanny, the image becomes an edge where the dialectic of order/disorder is played out in speculative and critical form. The spatial fetishism and hubristic urban design strategies that endeavour to smooth-over the complexity of the city to stabilise space for accumulation and consumption instead becomes a space of wild transgression and hybrid emergence; the invisible becomes visible, and the sanitised striated space becomes one of rupture, slowness, and affective hapticality (Qviström 2007; Harney and Moten 2013).



## 6 Percolating the Phantasmagoria

There is a loud rushing of the River Irk, a restless outlier on the margins of the Green Quarter's tall apartment blocks. I walk along the side of the river, noticing the bankside flourishing with buddleia and ferns (see figure 16). Scotland Road acts as a dividing line between the new developments of the Green Quarter and the redbrick railway bridge which is both a conduit for Victoria Station and the perimeter for the River Irk. The manicured grass of the Green Quarter redevelopment leads me away from the river, along a path and into a vertiginous landscape (see figure 17). The buildings are what Hatherley (2010) terms 'pseudomodernist': design styles and materials thrown together. The landscape is punctuated by entanglements of red/grey/white brick, glass, concrete, steel and wood.



Figure 16 – buddleia alongside the Irk.





Figure 17 – entrance to the Green Quarter.

Despite my critical preconceptions of redevelopments such as this (selective and uneven urban neoliberal redevelopment, the policing and privatisation of space and so on), I cannot help being struck by feelings of awe: the symmetry, perfect delineation and tranquillity viscerally reflect the utopian promise of progress. The glass buildings embody this promise, quite literally through the reflection of a crane that seems to follow me around, visible from all angles of the building. A sort of optical illusion that

reflects the underpinning technology to those standing outside whilst invisible to those inside (see figure 18) (Buck-Morss 1989).



Figure 18 – symmetry in the Green Quarter.

Stepping back from this aesthetic indulgence, I would like to reconceptualise this landscape as a *process of megalomania*, one where speed of construction and monumental size of product are enrolled with the finished aesthetic form to produce the phantasmagoria of modernity (Benjamin 1999). Although a site of awe, the Green Quarter is hardly a novel or idiosyncratic redevelopment (its style, ‘Cabe-ism’ was critically coined almost 10 years ago [Olcayto 2010, n.p.]). The symmetry of the landscape and repetitive nature of the redevelopment creates a certain modern temporal experience – a ‘mythic temporality’ of repetition and progress (Buck-Morss 1989, p103). This ‘endless perfectibility . . . and the conception of eternal recurrence’ is a dialectical antinomy, an ostensible newness that is in fact a hellish repetition thinly



veiled by spectacular presentations of novelty and innovation (Benjamin GSV<sup>3</sup> p178, quoted in Buck-Morss 1989, p108). To contest the phantasmagoria and disrupt the linearity of time instilled in the Green Quarter, I turn to the aforementioned River Irk and its lively bankside flourishing.

The Irk is one of the only natural watercourses present in the city. Running through the Northern towns of Greater Manchester, the Irk provided a conduit for mill discharge and has a history of liveliness and animation: ‘the eels in this river were formerly remarkable for their fatness, which was attributed to the grease and oils expressed by the mills’ (S. Clarke 1830, p72). Similarly, Engels’ (1844, p89) description of the Irk as harbouring ‘the most disgusting, blackish-green, slime pools . . . from the depths of which bubbles of miasmatic gas constantly arise and give forth a stench unendurable’ illustrates that even in its environmental degradation the river was still noted as lively and emergent (Dobraszczyk 2017). The Irk was culverted throughout the late 19<sup>th</sup> century, a distinctly modern practice in pragmatic and ideological terms (Warrender 2007). Whilst enabling urban development and bolstering of Manchester’s transport industry through expansion of Victoria Station, the culverting process also relegated and transformed Nature into an inconvenience that could be surpassed by the power of industrial modernity (Gunn and Owens 2006).

The bankside is an ecological edge, an interface between the soft water and the hard brickwork. Processes of decay, amplified by changing water levels and intensities, have created cracks in the brickwork, whilst upstream sediment has been deposited along the banks. Seeds, perhaps from upstream or dispersed by air, have settled and sprouted in this edge space, nurtured by the ready supply of moisture from the water. Perhaps the legacies of industrialism provide a curious composition of sediment and nutrients, enabling flourishing flora to foreground the liminal space between the visible and invisible Irk. The mouth of the culvert here becomes a threshold to a disappearing past where nature is constantly being subsumed and made invisible by processes of modernist urbanisation (Benjamin 2006b; Fraser 2012). Dialectical image 3 endeavours to disrupt the phantasmagorical tendencies of modernity through

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<sup>3</sup> ‘Gesammelte Schriften V’ or ‘Selected Writings V’.

foregrounding this threshold and similar edges and recombinant ecologies as described in previous sections.



Figure 19 – dialectical image 3.

A certain temporal disjuncture haunts dialectical image 3. The river is both a literal and metaphorical flow, as a series of alternative histories and temporalities are stored in and released by the river as it percolates downstream and enters different assemblages, affecting and acting *with* the bankside ecology (Serres and Latour 1995). The re-enlivened Irk replaces a water feature that runs through the middle of the Green Quarter redevelopment between the rows of trees and hedges. It follows steps down to a pool at the bottom where a fountain shoots water upwards into empty space affording no interaction or percolation. A counter-image of a re-enlivened and re-centred Irk therefore affords a backward-orientation to the city by assembling and enacting time and agency through a fragmentary 'catastrophic antihistoricism' of reassembling 'fragments of remembrance' in new and speculative constellations (Rabinbach 1997, p8; Farías 2010). The natural procession of watercourses provides lively internal (intra-action of soil/water/seeds) and external (spectral traces and/of histories) coming-together. Dialectical image 3 has thus engaged 'processes of decoupling and modifying [temporal] relations and [spatial] positions' (Callon and Law 2004, p9) in order to realise the complexities of histories, materialities, people and non-humans enrolled in the relational emergence of place rather than a simple linear 'progression through a homogenous, empty time' (Benjamin 1968, p260-261).

## 7 An Interruption by Simulacrum

I exit the Green Quarter, back onto Scotland Road where the Irk continues to percolate. The culvert means I can no longer walk-with the non-human unbidden flora or with the lively river. Instead I consult another non-human: the historical map obtained for the unrealised deep mapping (see chapter 3). I follow the Irk on the 1848 map which leads me, disorientated, through Victoria Station and into Cathedral Gardens.

The 1990s regeneration of Cathedral Gardens regeneration included a water feature called 'Seasons' that now runs around a central grassy area of the square – a mimetic substitution for the subterranean Irk (see figure 20).





Figure 20 – *Seasons* fountain at Cathedral Gardens.





Figure 21 – culverting of *Seasons*.

Latour describes these postmodern urban forms as a 'hyperreality . . . everything is a reflection, a simulacrum, a floating sign' (1993, p131). The dialectic of real/imaginary



emerges in this space – the simulated re-materialisation of the Irk as simulacrum is (re)presented as the natural process of water flowing (Baudrillard 1994). There is a dual articulation of human sovereignty and control in the square, firstly with the culverting of the original river, and secondly with the control of the water feature through linear demarcation and sporadic culverting (see figure 21). *Seasons* becomes a more perfect and desired version of what the Irk could possibly be in the centre of the city as it satisfies anxieties surrounding the wild and lively force of nature through rearticulation in a controlled simulation (Baudrillard 1994; Wark 1994).

As reality becomes perverted by this landscape design, the meaning of natural processes in the city becomes reaffirmed as existing in order to serve human interests and needs by '[creating] a sense of place [in] Cathedral Gardens' (Broadbend.studio n.d., n.p.; Hinchliffe et al. 2005). Modernity has here enrolled both natural process and urban history as part of the phantasmagoria, the illusion of material progress presented as a commodity through simulation (Benjamin 1968).

Cathedral Gardens is imbued with the juxtaposition of the real and the imaginary, however there is no 'edge' – no space within which lively agency can congeal and the real/imaginary dialectic be negotiated as a hybrid space. In more practical terms, the lack of 'edge' space here prevents concrete (or organic?) speculation about the possibility of 'daylighting' the Irk – uncovering the relegated, chthonic river to create new blue space, reduce runoff and flood risk, and re-wild the city through foregrounding the historical wildness that exists beneath it instead of through a simulated 'monumental [façade]' (Buck-Morss 1989, p96; Usher et al. 2018).

## 8 An Auratic Encounter in the Underbelly

Beneath the trainline into Piccadilly lies the exposed underbelly of transience and escape; the 'innards' that have stayed put for almost 200 years whilst swathes of people fleet through the station every minute. Piccadilly Station enables an urban social transience, the means to escape from the modern is a very condition of the modern itself.

The steady sound of trains trundling above is punctuated by the dripping of a leaking pipe. The arches are constituted through a series of (im)material interpenetrations: light and dark, sun and shadow, metal into brick spotted with flourishing buddleia and hart's tongue fern (see figure 22). Despite the sunlight there is an air of dampness. The juxtapositionary material composition of the railway arches – steel, ceramic, brick – is not obscene like the amalgamated Green Quarter, but rather layers and patterns of patina give a certain depth to this place.



Figure 22 – beneath Piccadilly Station.

I meander under the arches and find (figure 23):

Victorian Redbrick  
Orange rust, which fades into...  
Thick, sodden black mush  
Leafy liverwort  
Flourishing buddleia  
Sprouting Hart's-tongue fern



Figure 23 – black mould and leafy liverwort.

Patina is the accumulated strata of water, mould, moss, rust, oil and other materials, emergent from physical-historical processes of deposition and neglect – a visible sign of age created through more-than-human (in)organic interactions (Dobraszczyk 2013). These micro-ecosystems deepen the surface of the Victorian infrastructure, materialising instability, emergence, and history through the thickening layers of accumulation (Dawdy 2016).



My affective encounter with the arches of patina is twofold – intrigue and disgust. Unlike the mosses encountered in Castlefield, I do not want to touch these damp, dripping walls, however I am still drawn to them and the complex choreography of the emanating layers and deep colours. Here the wall of patina is enlivened, the assemblage comes-into-being through its relationalities, but also in its ability to return to me a gaze that is simultaneously seductive and repulsive (Bennett 2010; DeLanda 1997). This is what Benjamin would describe as an auratic experience, where the object of perception looks back at the viewer with a certain mystical quality (Benjamin 2006a; Costello 2005).



Figure 24 – Hart's tongue fern growing out of the damp wall.

The layers of patina that build up this curious assemblage enable an organic encounter with the past. Layers of past temporalities accumulate to make this present moment's encounter. Oil has seeped from the above trainline as cracks in the Victorian infrastructure emerge, perhaps bringing with it traces of metals and other pollutants that, once deposited onto the bricks holding-up the arches, are subject to a series of bio-chemical reactions (Krumbein 2002). Since the construction of the arches, energies and intensities between the surface and environment have emerged and declined, entering new relations with new atmospheric actants, the composition of which has vastly fluctuated over the past 200 years (Mosley 2008). The liveliness of this assemblage is not constricted to the immediate present. Benjamin's aura recognises the dynamism of the past as embodied in the entangled and co-dependent layers of the surface as a uniquely weaved together spacetime. The wall's aura exceeds the material relations of the assemblage, an outcome beyond the immanence of the assemblage in the form of aesthetic excess; a non-reproducible and non-commodifiable surface (Dawdy 2016). My auratic moment of encounter with the patinated surface is therefore not just a communication with its bio-material composition, but one with the different embodied temporalities of significance; an encounter rare amongst the city where so much of the built form has quite literally blasted history from its surface (Crompton 2012).

Architecture of reproduction and imitation denies the accumulation of strata and patina like that of the arches in order to maintain a space of order and a surface of stability often through artificially reproducing a marketable form of tradition or patina (Zukin 1993; Dobraszczuk 2017). There is an inherent denial of a dialectical relationship in spaces of 'purity' like those, and thus their edge, if at all, is one of homogeneity. The Piccadilly arches are instead a place where the dialectic of stability/instability (both materially and temporally) is manifest, through the instability of a time that becomes almost palpable through the slowly growing, expanding and congealing surface deposits, and the intended stability in form and function of the railway arches which is, in this new dialectical relationship, being slowly transformed. This edge is thus one of potential bio-difference, but also one where time is tangible yet untouchable, emerging in enchanting yet repulsive patterns and engaging reciprocal recognition through auratic moments. It is not one of 'aestheticized decay' (Dawdy 2016, p58) but a



chronotopian critical agency that rejects the conflation of newness and value, interrupting the linear temporality of progress and its material transformation of the city.

## 9 Concluding...or 'becoming-plant'?

This thesis has expanded on the work of more-than-human geographers by situating encounters with urban nature in the spatial and temporal conditions of Manchester. Approaches and theories from more-than-human geography, political ecology, and critical cultural theory have provided a theoretical cross-pollination which has reified the often vague concept of modernity in much more-than-human geography (for instance Maller 2018) while simultaneously bringing an ecological and non-human lens into the often humanist and material analyses of Walter Benjamin (Buck-Morss 1989).

A mixed-methodological approach has brought together the image-space, the body-space and the urban environment to entwine my personal accounts, experiences and affects with those of Manchester's flora to 'form a complex of writings' where plants have not been subjugated to my representations, but have guided the research (Hinchliffe et al. 2005, p648). Technology has been deployed in experimental ways, transforming my relationship with the environment to make new spaces for nonhuman voices and utterances, as well as stimulating an alternative innervation of the urban spatial imagination (Pitt 2015; Benjamin 1996).

The concepts of the 'urban edge' and the assemblage have been particularly useful tools to interrogate places of modernist design and illustrate how ontological and material hybridity produces forms of recombinant ecology that exceed existing materiality and semiotics. In response to Swyngedouw and Ernstson's (2018) cogent and urgent onto-political concerns, the dialectical image has been a means of harnessing the excesses of relations and exploring them further in critical and speculative ways. As a surrealist-inspired practice, it affords an artistic (re)production of landscape in an 'experimentation in contact with the real' (Deleuze and Guattari 1987, p2) that critiques modernity and, in disciplinary terms, offers a bridge between

different strands of geography and art (Hawkins 2013). Whilst the study area of this thesis was spatially limited to three places in Manchester, I contend that each offered a particular characteristic of modernity (consumption, dwelling, and transience) (Buck-Morss 1989) and thus enabled different angles of analysis.

Although addressing ideas of agonism, performativity and affect advocated by Swyngedouw and Ernstson (2018), it has been beyond the scope of this thesis to engage with their further call for a discussion of Rancierian politics in relation to flora. Scholars who have made this link have produced fascinating work (for instance Àvila and Ernstson 2019; Metzger 2014) however these have, like the overwhelming amount of more-than-human geography, focused on the animal rather than the plant. I therefore argue that the theories and approaches of Walter Benjamin provide a different but equally as striking means by which the more-than-human (plant) can be repoliticised through harnessing excess for speculation and situating hybridity in specific phantasmagorical landscapes of modernity.

The speculative critique afforded by the dialectical image may be taken beyond its existence as a political and 'aesthetic object' (Singer 1998, p8) to inform modes of a-modern urban design that acknowledge and integrate the inevitable material decay of the city, to design spaces and surfaces permeable to and colonisable by nonhumans. Pragmatically this would require enrolling a range of other actors such as designers and architects, and as such, is beyond the scope of this thesis to discuss, however can be posited as a practical expansion on Hinchliffe and Whatmore's (2006) notion of 'living cities'. Transforming everyday urban materiality through enabling more-than-human temporalities and entanglements can create everyday spaces where urban nature is not controlled or subjugated by humans (Lorimer 2008).

It is an ethical and political imperative to engage with wild natures in the city. Sensory attention to nonhumans is an urgent practice; to choose a narrative that has direction but is not linear, and to reveal the ontological and material excesses of Manchester as it is 'becoming-plant' (Deleuze and Guattari 1987, p275).

## Bibliography

- Anderson, B. and Tolia-Kelly, D. (2004). 'Matter(s) in Social and Cultural Geography', *Geoforum* 35(6), pp. 669-74.
- Anker, P. (2009). *Imperial Ecology: environmental order in the British Empire, 1895-1945*. Cambridge, MA: Harvard University Press.
- Armson, D. Stringer, P and Ennos, A.R. (2013). 'The effect of street trees and amenity grass on urban surface water runoff in Manchester, UK', *Urban Forestry & Urban Greening* 12(3), pp. 282-286.
- Auerbach, A. (2007). 'Imagine no Metaphors: the dialectical image of Walter Benjamin', *Image & Narrative* 18 [Online]. Available at: [http://www.imageandnarrative.be/thinking\\_pictures/auerbach.htm](http://www.imageandnarrative.be/thinking_pictures/auerbach.htm) (Accessed 15 December 2018).
- Àvila, M. and Ernstson, H. (2019, in press). 'Realms of Exposure: A Speculative Design Perspective of Material Agency and Political Ecology' in Ernstson, H. and Sörlin, S. (eds.) *Grounding Urban Natures: Histories and Futures of Urban Ecologies*. Chapter 5, n.p.
- Badmington, N. (2004). 'Mapping Posthumanism' in Castree et al. 'Mapping Posthumanism: an exchange', *Environment and Planning A* 36(8), pp. 1344-1351.
- Bakker, K. and Bridge, G. (2006). 'Material Worlds? Resource geographies and the "matter of nature"', *Progress in Human Geography*, 30(1), pp. 5-27.
- Barad, K. (2007). *Meeting the universe halfway: quantum physics and the entanglement of matter and meaning*, Durham, NC: Duke University Press.
- Barad, K. (2010). 'Quantum entanglements and hauntological relations of inheritance: dis/continuities, spacetime enfoldings, and justice-to-come', *Derrida Today, Special Issue: Deconstruction and Science* 3(2), pp. 240–268.
- Barker, G. (2000). *Ecological Recombination in Urban Areas: implications for nature conservation*. Peterborough: English Nature.
- Baudrillard, J. (1994). *Simulacra and Simulation*. [Translated by Glaser, S.]. Ann Arbor, MI: University of Michigan Press.
- Benjamin, W. (1968) [1936]. *Illuminations*. [Translated by Zohn, H. and edited by Arendt, H.]. New York, NY: Schocken Books.

Benjamin, W. (1996). 'Selected Writings Volume 1: 1913-1926'. (Translated and edited by Livingstone, R., Bullock, M. and Jennings, M.W.). Cambridge, MA: Belknap Press.

Benjamin, W. (1999). *The Arcades Project*. [Translated by Eiland, H. and McLaughlin, K.] Cambridge, MA: Harvard University Press.

Benjamin, W. (2006a). 'On Hashish'. (Translated by Eiland, H.). Cambridge, MA: Belknap Press.

Benjamin, W. (2006b). 'Selected Writings Volume 2, Part 1: 1927-1930'. (Translated and edited by Livingstone, R., Jennings, M.W., Bullock, M., Eiland, H. and Smith, G.). Cambridge, MA: Belknap Press.

Bennett, J. (2010). *Vibrant Matter: a political ecology of things*. Durham, NC: Duke University Press.

Bohn, C.O. (2019). 'Historiography and Remembrance: on Walter Benjamin's concept of Eingedenken', *Religions* 10(40), pp. 1-8.

Booth, K. and Williams, S. (2014). 'A more-than-human political moment (and other natural catastrophes)', *Space and Polity* 18(2), pp. 182-195.

Braun, B. (2005). 'Environmental issues: writing a more-than-human urban geography', *Progress in Human Geography* 29(5), pp. 635-650.

Braun, B. (2015). 'New Materialisms and Neoliberal Natures', *Antipode* 47(1), pp. 1-14.

Brice, J. (2014). 'Attending to Grape Vines: perceptual practices, planty agencies, and multiple temporalities in Australian viticulture', *Social & Cultural Geography* 15(8), pp 942-965.

broadbent.studio (n.d.). *Seasons – Cathedral Gardens*. Available at: <https://broadbent.studio/seasons-cathedral-gardens> (Accessed 5 March 2019).

Buck-Morss, S. (1989). *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*. Cambridge, MA: MIT Press.

Callon, M. and Law, J. (2004). 'Guest Editorial', *Environment and Planning D: Society and Space* 22, pp. 3-11.

Castree, N. (1995). 'The nature of produced nature: materiality and knowledge construction in Marxism', *Antipode* 27, pp. 12-48.

Castree, N., Nash, C., Badmington, N., Braun, B., Murdoch, J. and Whatmore, S. (2004). 'Mapping posthumanism: an exchange', *Environment and Planning A* 36(8), pp. 1341-1363.

Caygill, H. (2005). *Walter Benjamin: the colour of experience*. London: Routledge.

Clarke, M. M., Reichard, S. H., and Hamilton, C. W. (2006). 'Prevalence of different horticultural taxa of ivy (*Hedera* spp., Araliaceae) in invading populations', *Biological Invasions* 8(2), pp. 149–157.

Clarke, S.R. (1830). *The New Lancashire Gazetteer*. Holborn: Henry Teesdale and Co.

Cohen, A.A. (2015). "We Support Circus Animals Who Kill Their Captors": Nonhuman Resistance, Animal Subjectivity, and the Politics of Democracy' in Spannring, R., Heuberger, R., Kompatscher, G., Oberprantacher, A., Karin, S. and Boucabeille, A. (eds.) *Tiere – Texte -Transformationen*. Bielefeld: Transcript. pp. 277-295.

Costello, D. (2005). 'Aura, Face, Photography: re-reading Benjamin today', in Benjamin, A.E. (ed.) 'Walter Benjamin and Art'. London and New York, NY: Continuum. pp. 164-184.

Crompton, A. (2012). 'Manchester Black and Blue', *Bulletin of John Rylands Library*, 89(1), pp. 277–291.

Cronon, W. (1996). 'The Trouble with Wilderness: Or, Getting Back to the Wrong Nature'. *Environmental History*, 1(1): 7-28.

Crosby, A., Lorber-Kasunic, J. and Vanni, I. (2014). 'Value the Edge: permaculture as counterculture in Australia', *M/C Journal* 17(6) [Online]. Available at: <http://journal.media-culture.org.au/index.php/mcjournal/article/view/915> (Accessed 4 January 2019).

Dawdy, S.L. (2016). *Patina: a profane archaeology*. Chicago, IL: University of Chicago Press.

de Block, G. and Vicenzotti, V. (2018). 'The Effects of Affect: a plea for distance between the human and non-human', *Journal of Landscape Architecture* 13(2), pp. 45-55.



DeLanda, M. (1997). *A Thousand Years of Nonlinear History*. Cambridge, MA: MIT Press.

DeLanda, M. (2006). *A New Philosophy of Society: assemblage theory and social complexity*. London and New York, NY: Continuum.

Deleuze, G. (1968) [1994]. *Difference and Repetition*. (Translated by Patton, P.) New York City, NY: Columbia University Press.

Deleuze, G. and Guattari, F. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia*. [Translated by Massumi, B.] Minneapolis, MN: University of Minnesota Press.

Deloitte (2018). *First Street, Manchester: Development Framework Update 2018 – Consultation Draft*. Manchester: Deloitte. [Online]. Available at: [www.manchester.gov.uk/download/downloads/id/.../first\\_street\\_srf\\_august\\_2018.pdf](http://www.manchester.gov.uk/download/downloads/id/.../first_street_srf_august_2018.pdf) (Accessed 20 March 2019).

Denzin, N. and Giardina, M. D. (2008). 'Introduction: the elephant in the living room, OR advancing the conversation about the politics of evidence' In: Denzin, N. and Giardina, M. D. (eds.) *Qualitative Enquiry and the Politics of Evidence*. Walnut Creek: Left Coast Press, pp. 9-52.

DeSilvey, C. (2017). *Curated decay: heritage beyond saving*. Minneapolis, MN: University of Minnesota Press.

Didham, R. K., Hammond, P. M., Lawton, J. H., Eggleton, P. and Stork, N. E. (1998). 'Beetle species responses to tropical forest fragmentation', *Ecological Monographs* 68(3), pp. 295-323.

Dobraszczyk, P. (2013). '108 arches to Ardwick: the view from below', *Rag-Picking History*, 22 February. Available at: <https://ragpickinghistory.co.uk/2013/02/22/108-arches-to-ardwick-the-view-from-below/> (Accessed 29 December 2018).

Dobraszczyk, P. (2017). *The Dead City: Urban Ruins and the Spectacle of Decay*. London and New York, NY: I.B. Tauris.

Dodge, M. (2012). 'Contemporary Cities and Infrastructural Imaginaries', *Cities @ Manchester Blog*, February 20. Available at: <https://citiesmcr.wordpress.com/2012/02/20/contemporary-cities-and-infrastructural-imaginaries/#comments> (Accessed 1 March 2019).

Dodge, M., Wyke, T. and Robson, B. (2018). *Manchester: mapping the city*. Edinburgh: Birlinn.

Douglas, M. (1966). *Purity and Danger: an analysis of concepts of pollution and taboo*. London: Routledge.

Edensor, T. (2005). *Industrial Ruins: space, aesthetics and materiality*. Oxford: Berg Publishers.

Edensor, T. (2008). 'Mundane hauntings: commuting through the phantasmagoric working-class spaces of Manchester, England', *Cultural Geographies* 15(3), pp. 313-333.

Edensor, T. (2011). 'Entangled agencies, material networks and repair in a building assemblage: the mutable stone of St Ann's Church, Manchester', *Transactions of the Institute of British Geographers*, 36(2), pp. 238-252.

Engels, F. (1845) [1968]. *The Condition of the Working Class in England*. (Translated by Wischnewetzky, F.K.). London: Allen and Unwin.

Ernstson, H. and Sörlin, S. (2013). 'Ecosystem Services as a Technology of Globalization: on articulating values in urban nature', *Ecological Economics* 86(1), pp. 274-284.

Farías, I. (2010). 'Introduction: decentring the object of urban studies', in Farías, I. and Bender, T. (eds.) *Urban Assemblages: How Actor-Network Theory Changes Urban Research*. New York, NY: Routledge. pp. 1–24.

Felski, R. (2000). 'The Invention of Everyday Life', *New Formations* 39, pp. 15–31.

Forsyth, I., Lorimer, H., Merriman, P. and Robinson, J. (2013). 'What are surfaces?', *Environment and Planning A* 45(5), pp. 1013-1020.

Fraser, E. (2012). *Interrupting Progress: Ruins, rubble and catastrophe in Walter Benjamin's history*. MA. Sydney University of Technology.

Gabrys, J. (2012). 'Becoming Urban: sitework from a moss-eye view', *Environment and Planning A: Economy and Space* 44(12), pp. 2922-2939.

Gordillo, G.R. (2014). *Rubble: the afterlife of destruction*. Durham, NC: Duke University Press.

Graham, S. and Thrift, N. (2007). 'Out of Order: Understanding Repair and Maintenance', *Theory, Culture & Society* 24(3), pp. 1-25.

Green-Tech (2019). *Resi-Grille Tree Grille System*. Available at: <https://www.green-tech.co.uk/hard-landscaping/tree-grilles-and-guards/resi-grille-tree-grille-system> (Accessed 3 March 2019).

Gunn, S. and Owens, A. (2006). 'Nature, technology and the modern city: an introduction', *Cultural Geographies* 13(4), pp. 491-496.

Habermas, J. (1985). *Philosophical-Political Profiles*. [Translated by Lawrence, F.G.]. Cambridge: Polity Press.

Haraway, D.J (1988). 'Situated Knowledges: the science question in feminism and the privilege of partial perspective', *Feminist Studies* 14(3), pp. 575-599.

Haraway, D.J. (2003). *The Companion Species Manifesto: dogs, people, and significant otherness*. Chicago, IL: University of Chicago Press.

Haraway, D.J. (2008). *When Species Meet*. Minneapolis, MN: University of Minnesota Press.

Harney, S. and Moten, F. (2013). *The Undercommons: Fugitive Planning & Black Study*. New York, NY: Minor Compositions.

Harvey, D. (2007). 'Neoliberalism as Creative Destruction', *American Academy of Political and Social Science* 610, pp. 22-44.

Hatherley, O. (2010). *A Guide to the New Ruins of Great Britain*. London and New York, NY: Verso.

Hawkins, G. and Muecke, S. (eds.) *Culture and Waste: the creation and destruction of value*. Lanham, MD: Rowman & Littlefield Publishers.

Hawkins, H. (2013). 'Geography and Art. An Expanding Field: site, the body and practice', *Progress in Human Geography* 37(1), pp. 52-71.

Head, L. and Atchison, J. (2009). 'Cultural ecology: emerging human-plant geographies', *Progress in Human Geography* 33(2), pp. 236-245.

Head, L., Atchinson, J., Phillips, C. and Buckingham, K. (2014). 'Vegetal Politics: belonging, practices and places', *Social & Cultural Geography* 15(8), pp. 861-870.

Heng, T. (2017). *Visual Methods in the Field: Photography for the Social Sciences*. Routledge: London.

Heynen, N., Kaika, M. and Swyngedouw, E. (2006). *In the nature of cities: urban political ecology and the politics of urban metabolism*. Routledge, London.

Hinchliffe, S. (2007). *Geographies of Nature: societies, environments, ecologies*. London: Sage.

Hinchliffe, S. (2011). 'Book review forum: *Vibrant Matter: A Political Ecology of Things*', *Dialogues in Human Geography*, 1(3), pp. 396–399.

Hinchliffe, S. and Whatmore, S. (2006). 'Living Cities: towards a politics of conviviality', *Science as Culture*, 15(2), pp. 123-138.

Hinchliffe, S., Kearnes, M.B., Degen, M. and Whatmore, S. (2005). 'Urban Wild Things: a cosmopolitical experiment', *Environment and Planning D: Society and Space*, 23(1), pp. 643-658.

Jacobs, J.M. (2012). 'Urban Geographies I: still thinking cities relationally', *Progress in Human Geography* 36(3), pp. 412-422.

Jansson, A. and Lagerkvist, A. (2009). 'The Future Gaze: city panoramas as politico-emotive geographies', *Journal of Visual Culture* 8(1), pp. 25-53.

Kaika, M. (2005). *City of Flows: modernity, nature, and the city*. London: Routledge.

Kaika, M. and Swyngedouw, E. (2000). 'Fetishizing the Modern City: the phantasmagoria of urban technological networks', *International Journal of Urban and Regional Research* 24(1), pp. 120-138.

Krumbein, W.E. (2002). 'Patina and Cultural Heritage – a geomicrobiologist's Perspective', in Kozłowski, R. (ed.) *Proceedings of the Vth EC Conference Cultural Heritage Research: A Pan-European Challenge*. Krakow, Poland: EC and ISC. pp. 39-47

Latour, B. (1993). *We Have Never Been Modern*. Cambridge, MA: Harvard University Press.

Latour, B. (1999). 'On Recalling ANT' in Law, J. and Hassard, J. (eds.) *Actor Network Theory and After*. Oxford: Blackwell Publishers, pp. 15-26.

Latour, B. (2004). *Politics of Nature: How to Bring the Sciences into Democracy*. [Translated by Porter, C.] Cambridge, MA: Harvard University Press.

Laurance, W.F., Nascimento, H.E.M., Laurance, S.G., Andrade, A., Ewers, R.M., Harms, K.E., Luizão, R.C.C. and Ribero, J.E. (2007). 'Habitat Fragmentation, Variable



Edge Effects, and the Landscape-Divergence Hypothesis', PLoS One 2(10), e1017 [Online]. Available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0001017> (Accessed 3 January 2019).

Lorimer, J. (2008). 'Living roofs and brownfield wildlife: towards a fluid biogeography of UK nature conservation', *Environment and Planning A*, 40(9), pp. 2042-2060.

Lorimer, J. (2015). 'Nonhuman Charisma' in *Wildlife in the Anthropocene: Conservation after Nature*. Minneapolis, MN: University of Minnesota Press.

Lorimer, J. and Davies, G. (2010). 'When species meet. Interdisciplinary conversations on interspecies encounters', *Environment and Planning D: Society and Space* 28(1), pp. 32–33.

Luciano, D. and Chen, M.Y. (2015). 'Introduction: Has the queer ever been human?', *GLQ: A Journal of Lesbian and Gay Studies*, 21(2), pp. iv-207.

Mabey, R. (2010). *Weeds: How Vagabond Plants Gatecrashed Civilisation and Changed the Way We Think About Nature*. London: Profile Books.

Madgin, R. (2010). 'Reconceptualising the Historic Urban Environment: conservation and regeneration in Castlefield, Manchester, 1960–2009', *Planning Perspectives* 25(1), pp. 29-48.

Maller, C. (2018). *Healthy Urban Environments: more-than-human theories*. Abingdon and New York, NY: Routledge.

Manning, E. (2016). *The Minor Gesture*. Durham, NC: Duke University Press.

May, T. (2005). *Gilles Deleuze: An Introduction*. Cambridge: Cambridge University Press.

Mellor, R. (2002). 'Hypocritical City: cycles of urban exclusion' in Peck, J, and Ward, K. (eds.) *City of Revolution: restructuring Manchester*. Manchester: Manchester University Press. pp. 214-235.

Meskel, L. (2005). *Archaeologies of Materiality*. Malden, MA: Blackwell Publishing.

Metzger, J. (2014). 'The moose are protesting: the more-than-human politics of transport infrastructure development', in Metzger, J., Allmendinger, P. and Oosterlynck, S. (eds.), *Planning Against the Political: democratic deficits in European territorial governance*. Abingdon and New York, NY: Routledge. pp. 191-214.

Mosley, S. (2008). *The Chimney of the World: A History of Smoke Pollution in Victorian and Edwardian Manchester*. (2<sup>nd</sup> edn.) Routledge, London.

Neimanis, A. (2012). 'On Collaboration (for Barbara Godard)', *Nordic Journal of Feminist and Gender Research*, 20(3), pp. 215-221.

Olcayto, R. (2010). Cabe-ism isn't meant as a compliment, *The Guardian*, 19 October [Online]. Available at: <https://www.theguardian.com/artanddesign/2010/oct/19/cabe-ism-not-meant-as-compliment> (Accessed 2 February 2019).

OpenStreetMap Contributors (2019). Data Available from the OpenStreetMap licensed under the Open Data Commons Open Database License. Copyright and license information available at: <https://www.openstreetmap.org/copyright> (Accessed 20 March 2019).

Owen, D.F. and Whiteway, W.R. (1980). 'Buddleia davidii in Britain: History and development of an associated fauna', *Biological Conservation* 17(2), pp. 149-155.

Parkinson-Bailey, J.J. (2000). *Manchester: an architectural history*. Manchester: Manchester University Press.

Pearson, C. (2015). 'Beyond 'resistance': rethinking nonhuman agency for a 'more-than-human' world', *European Review of History* 22(5), pp. 709-725.

Peck, J. and Ward, K. (2002). 'Placing Manchester' in Peck, J. and Ward, K. (eds.) *City of Revolution: restructuring Manchester*. Manchester: Manchester University Press. pp. 1-17.

Pellegrini, P. and Baudry, S. (2014). 'Streets as New Places to Bring Together both Humans and Plants: examples from Paris and Montpellier (France)', *Social & Cultural Geography* 15(8), pp. 871-900.

Pensky, M. (2004). 'Method and Time: Benjamin's Dialectical Images' in Ferris, D.S. (ed.) *The Cambridge Companion to Walter Benjamin*. Cambridge: Cambridge University Press. pp. 177-98.

Pitt, H. (2015). 'On showing and being shown plants – a guide to methods for more-than-human geography', *Area* 47(1), pp. 48-55.

Plumwood, V. (2009). 'Nature in the active voice', *Australian Humanities Review* 46, pp. 113-129.

Poe, M.R., LeCompte, J., McLain, R. and Hurley, P. (2014). 'Urban Foraging and the Relational Ecologies of Belonging', *Social and Cultural Geography* 15(8), pp. 901-919.

Qviström, M. (2007). 'Landscapes out of Order: studying the inner urban fringe beyond the rural-urban divide', *Geografiska Annaler: Series B, Human Geography* 89(3), pp. 269-282.

Rabinbach, A. (1997). *In the Shadow of Catastrophe: German intellectuals between apocalypse and enlightenment*. Berkley, CA: University of California Press.

Radford, K.G. and James, P. (2013). 'Changes in the Value of Ecosystem Services Along a Rural-Urban Gradient: a case study of Greater Manchester, UK', *Landscape and Urban Planning* 109(1), pp. 117-127.

Rocheleau, D. and Roth, R. (2007). 'Rooted networks, relational webs and powers of connection: rethinking human and political ecologies', *Geoforum* 38, pp. 433-437.

Rose, F. (2006). *The Wild Flower Key: how to identify wild plants, trees and shrubs in Britain and Ireland*. London: Penguin.

Rotherham, I.D. (2017). *Recombinant Ecology – A Hybrid future?* Dordrecht: Springer.

Schinkel, W. (2015). 'The Image of Crisis: Walter Benjamin and the interpretation of 'crisis' in modernity', *Thesis Eleven* 127(1), pp. 36-51.

Serres, M. and Latour, B. (1995). *Conversations on Science, Culture, and Time: Michel Serres with Bruno Latour: Michel Serres Interviewed by Bruno Latour*. (Translated by Lapidus, R.). Ann Arbor, MI: University of Michigan Press.

Singer, A. (1998). 'Beautiful Errors: aesthetics and the art of contextualisation', *boundary 2* 25(1), pp. 7-34.

Situated Ecologies (n.d.). *About Situated Ecologies*. Available at: <http://www.situatedecologies.net/about> (Accessed 2 February 2019).

Smith, B.J. and Prikryl, R. (2007). 'Diagnosing Decay: the value of medical analogy in understanding the weathering of building stones', in Prikryl, R. and Smith, B. (eds.) *Building Stone Decay: from diagnosis to conversation*. London: Geological Society Special Publications. pp. 1-8.

Springgay, S. and Truman, S.E. (2018). *Walking Methodologies in a More-than-human World: WalkingLab*. Abingdon, Oxon: Routledge.

Stark, H. (2015). 'Deleuze and Critical Plant Studies' in Stark, H. and Roffe, J. (eds.) *Deleuze and the Non/Human*. Basingstoke: Palgrave Macmillan. pp. 180-196.

Stengers, I. (2010). 'Including nonhumans in political theory: opening Pandora's Box?', in Braun, B. and Whatmore, S. (eds.) *Political Matter: Technoscience, Democracy, and Public Life*. Minneapolis, MN: University of Minnesota Press. pp. 3–34.

Swyngedouw, E. (1996). 'The city as a hybrid: On nature, society and cyborg urbanization', *Capitalism Nature Socialism* 7(2), pp. 65–80.

Swyngedouw, E. and Ernstson, H. (2018). 'Interrupting the Anthro-po-obScene: Immuno-biopolitics and Depoliticizing Ontologies in the Anthropocene', *Theory, Culture & Society* 35(6), pp. 3-30.

Thiele, K. (2014). 'Ethos of Diffraction: new paradigms for a (post)humanist ethics', *Parallax* 20(3), pp. 202-216.

Tsing, A.L. (2015). *The Mushroom at the End of the World: on the possibility of life in capitalist ruins*. Princeton, NJ: Princeton University Press.

Tuan, Y.F. (1989). 'Surface Phenomena and Aesthetic Experience', *Annals of the Association of American Geographers* 79(2), pp. 233-241.

Turner, N.J., Davidson-Hunt, I.J. and O'Flaherty, M. (2003). 'Living on the Edge: ecological and cultural edges as sources of diversity for social-ecological resilience', *Human Ecology* 31(3), pp. 439-461.

Usher, M., Shuttleworth, E., Clay, G. and Huck, J. (2018). *Engaging waterways: enhancing social and ecological resilience through participatory daylighting*. Poster presented at European Geosciences Union General Assembly, Austria, Vienna.

van Dooren, T. and Bird-Rose, D. (2012). 'Storied Places in a Multispecies City', *Humanimalia: A Journal of Human/Animal Interface Studies*, 3(2), pp. 1-27.

Vanni, I. (2016). 'The Transcultural Edge', *PORTAL* 13(1). [Online]. Available at: <https://epress.lib.uts.edu.au/journals/index.php/portal/article/view/4829> (Accessed 4 January 2019).

Wark, M. (1994). 'Third Nature', *Cultural Studies* 8(1), pp. 115-132.

Warrender, K. (2007). *Underground Manchester: secrets of the city revealed*. Manchester: Willow Publishing.

Washick, B. and Wingrove, E. (2015). 'Politics that Matter: thinking about power and justice with the new materialists', *Contemporary Political Theory*, 14(1) pp. 63–79.



Whatmore, S. (1999). 'Hybrid Geographies: rethinking the *human* in human geography' in Massey, D., Allen, J. and Sarre, P. (eds.), *Human Geography Today*. Cambridge: Polity Press. pp. 24-39.

Whatmore, S. (2002). *Hybrid Geographies: Natures, Cultures, Spaces*. London: SAGE.

Whatmore, S. (2006). 'Materialist Returns: practising cultural geography in and for a more-than-human world', *Cultural Geographies* 13(4), pp. 600-609.

Wilmott, C. (2016). *Living the Map: mobile mapping in post/colonial cities*. PhD. University of Manchester.

Wissenburg, M. and Scholsberg, D. (2014). *Political Animals and Animal Politics*. Basingstoke: Palgrave Macmillan.

Wolch, J. (1996). 'Zoopolis', *Capitalism, Nature, Socialism* 7(2), pp. 21-47.

Yaeger, P. (2003). 'Trash as Archive, Trash as Enlightenment' In: Hawkins, G. and Muecke, S. (eds.) *Culture and Waste: the creation and destruction of value*. Lanham, MD: Rowman & Littlefield Publishers. pp. 103-115.

Zukin, S. (1993). *Landscapes of Power: from Detroit to Disney World*. Berkley, CA: University of California Press.

Zylinska, J. (2017). *Nonhuman Photography*. Cambridge, MA: MIT Press.