Introduction: Cultural and Material Forms of Urban Pollution

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In an increasingly urbanised world, environmental degradation is a crucial factor in the development and liveability of cities. Air quality, garbage, noise, stench and other forms of pollution both reflect and influence human habits and social behaviour. Urban environmental and public health policies are products of political ideologies, dominating important aspects of city life and the physical environment. Simultaneously, vernacular understandings of the city can influence or undermine environmental and social policy. While urban environmental management has received increasing attention in recent years, technological and economic approaches are generally privileged over attention to social and cultural perspectives on pollution. Surprisingly little is known about perceptions of pollution and environmental degradation in cities, how such perceptions are embedded in the everyday lives of city dwellers, or how they interact with urban space, power and identity.

Social and cultural aspects of the urban environment are important to urban and environmental scholars alike. However, environmental anthropology and sociology have often neglected the urban, tending to focus on natural resource management and conservation, and on issues of depletion rather than pollution. With a few notable exceptions (Aoyagi et al. 1998; Checker 2001, 2005), urban sociology and anthropology have rarely focused on the environment,[1] retaining a stronger emphasis on more traditional topics such as urban poverty and informal sector activities;

1. Urban historians have displayed a stronger, though also relatively recent, interest in environmental issues and specifically pollution (see Melosi 2000; George 2001; Gandy 2002; Pellow 2002).

ethnicity and cultural pluralism; rural-urban migration and consequent adaptations; and crime and violence. Recognizing the socio-cultural significance of pollution and environmental degradation, references to environmental and ecological perceptions have been increasing in urban studies, with a particular focus on social movements such as the environmental justice movement (e.g. McKean 1981; Bullard 2000; Checker 2005). These studies of urban environmental movements have largely been based in industrialised countries such as Japan or the United States. Urban planners and policy makers have also tended to neglect the important cultural and social aspects of urban environmental management. Despite growing attention to the local dimensions of rural environmental problems and the possibilities as well as the complications of participatory management, the consequences of this discourse for the urban have not been fully incorporated. In addition, sustainable development experts have a propensity for macro-level analyses, neglecting more ethnographic accounts.

An anthropological approach to urban pollution provides insights overlooked in more technocratic models of pollution. An emphasis on the emic perspective allows a critique of such standard, often developmentalist, environmental knowledge and enables a more intimate and nuanced comprehension of the social production of pollution. Anthropology contributes to urban environmental studies extensive ethnographic research and a contextual framework for understanding the seemingly universal processes of garbage removal, sewage systems and so on. As Hajer (1995: 18) notes, 'to analyse discourses on pollution as quasi-technical decision-making on well-defined physical issues … misses the essentially social questions that are implicated in these debates'. The work of, for instance, urban planners, policymakers or sustainable development experts is complicated by such emic constructions and perceptions of environmental issues, and the cultural context, including interpretations of the urban environment and nature, that shapes them. An anthropological approach to urban pollution focuses on cultural meanings and values attached to conceptions of 'clean' and 'dirty', purity and impurity, healthy and unhealthy environments. It addresses the implications of pollution as it is related to discrimination, class, urban poverty, social hierarchies and ethnic segregation in cities. Pollution is used as a lens through which to dissect the social and cultural intricacies of the urban environment, space, power and capital.

In this edited volume, pollution is conceptualised broadly as having both imagined and material aspects. Many studies of pollution, including much of the work in this volume, analyse local understandings and articulations of urban pollution. Within these studies, there are distinct analytical categories, that do tend to overlap to a certain extent. A first concern is with symbolic forms and cultural perceptions of pollution and how these are manifested and expressed in urban space. Its parallel focus is on concrete, physically measurable forms of urban pollution – garbage, sewage, air

pollution – and anthropological methods are used to understand more clearly the issues of power, class and ethnicity surrounding the production and removal of such wastes. Such a symbolic-material dualism only holds true up to a point, as these categories are, of course, overlapping and interrelated. The materiality and sociality of urban pollution are relational entities that produce each other – this relational materiality itself, as well as the hybridity of pollution, can be the focus of study. The social life of garbage – material waste – can be explored just as the materiality of symbolic pollution needs to be understood more precisely; an analysis of the continued significance of 'modern' distinctions between the natural and the symbolic (cf. Latour 1993; Law 1999) within pollution is also a promising avenue for future research. The 'pure' distinction between material and symbolic pollution reflects the performed distance between 'technical' environmental engineers and urban planners dealing with 'material' garbage, on the one hand, and 'cultural' anthropologists studying 'symbolic' social pollution on the other. While this volume, containing mostly anthropological contributions, has an inbuilt bias towards the latter position, ultimately, an interdisciplinary study of urban pollution needs to take account of such hybridity, for instance by acknowledging and analysing the agency or effectivity of garbage, water and so on (e.g. Swyngedouw 2004; Hawkins 2005; Kaika 2005; Heynen et al. 2006; Gille 2007). Medical anthropology and biosocial studies of human bodies 'polluted' or afflicted by non-human elements provide another, though not always explicitly urban, field of exploration (see Schell and Denham 2003; Nguyen and Peschard 2003; Obrist et al. 2003).

While acknowledging the constructed nature of this broad material-symbolic dualism, the rest of this introduction remains organised within it, while attempting, as many of the following chapters do, to complicate the 'purity' of such distinctions. Re-examining classical work on pollution and concepts of purity and order, this volume engages with modern expressions of these themes in urban areas, which are particularly affected by processes of globalisation, including increasingly neoliberal urban policy, privatisation of urban space, continued migration and spatialised ethnic tension within cities.

Cultural pollution

Cultural constructions of pollution: meaning and identity

The seminal work in terms of cultural pollution is Mary Douglas' *Purity and Danger* (2002), first published in 1966. Her structuralist approach and the definition of dirt – the unclean – as 'matter out of place' (Douglas 2002: 44) inextricably link pollution to the cultural specifics of a social order.

Defining dirt involves classifying and sorting, the drawing of boundaries and margins. Pollution results from boundary transgression and, in being defined as pollution, contributes to the marking and safeguarding of the same boundaries. What is out of place depends on the nature of the social order as inscribed in the scheme of cultural categories and reflected in the way meaning is created. Dirt is a cultural construct, existing in the eye of the beholder (2002: 2), rather than a universal category. Given the centrality of the social order in definitions of dirt, pollution, according to Douglas, is essentially disorder. It is that which transgresses the social order, disturbing rules and classifications set by religion, science or ideology. Dirt disrupts and disturbs this order – which is perceived as a naturally given order – as boundaries are crossed. Dirt threatens the balance and stability provided by the social order; the ensuing imbalance is a danger and is regarded as wrong and immoral. Pollution, therefore, is not so much a matter of hygiene as it is a framing of moral symbols. Consequently, transgressions must be resolved through punishment or ritual purification. Many religions, for instance, include concepts of pollution, often accompanied by guilt, and associated with specific rites of purification. Ascribing phenomena with the status of dirt, and so classifying them as potential dangers, amounts to the symbolic maintenance of boundaries and contributes to the stability and safeguarding of a specific social structure. Boundaries may be conceptualised in corporal, social, spatial and geographical terms and consist of for instance the skin of the human body, walls, crossroads or national borders. Particularly likely to be classified as pollutants are the anomalous, the ambiguous, the liminal and the transitional; dealing with them reduces uncertainty and increases the logic of a social order and the unity of a society. Concepts of symbolic or ritual pollution serve to create and maintain social categories, to establish inside and outside worlds, to mark and protect the difference between what is safe and what is dangerous, what is acceptable and what is unacceptable.

Critique of Douglas' theory focused on the deterministic relationship between cosmology and social environment, in particular her understanding of culture as existentially determined by social organisation. Her work – popular in part because of its wide applicability – has been classified as overly universalistic, to the extent of ignoring social and historical contexts. In arguing that establishing order through concepts of purity is universal, Douglas' theory posits a unidirectional movement from chaos to order, discounting social forces that might seek to transform order into ambiguity, disorder or hybridity. This neglect of the hybrid led to criticism of her excessive dependence on a Levi-Strauss-inspired dualist paradigm, as her theory of purity and pollution relies heavily on the concept of binary oppositions. This is also in conflict with postcolonial approaches in cultural theory which reject dichotomies but

emphasise the dynamic nature of culture as a constantly changing process. They posit that culture is negotiated and framed by both local and global conditions (Hall 1997; Inda and Rosaldo 2008). Mary Douglas' own tendencies towards unmitigated dualism or structuralism, however, are sometimes reproduced by scholars in ways that disregard the social and technical complexities underlying social and cultural realities. Notwithstanding these points of criticism, Douglas' work is still fundamental to research on pollution and purity.

In addition to such conceptual critiques, the constructivism typifying Douglas' approach to dirt can lead to a disproportionate emphasis on cultural relativism, obscuring real biomedical differences. While pollution is in many ways a cultural construct, it is simultaneously an 'objective', quantifiable phenomenon that impacts negatively on human and ecological health. Waterborne or airborne pathogens are pollutants that can be measured in quantitative terms. This does not preclude the fact that the perception of the problems caused by the presence of disease vectors and pathogens differs from one group to the other, or that filth is used to draw or reaffirm social boundaries. Pollution, then, has two sides. It is a socially constructed phenomenon employed to reaffirm social order, as posited by Mary Douglas. We seek to remedy her overly constructivist inclinations by placing equal emphasis on pollution as a measurable condition affecting human well-being and environmental sustainability.

Globalisation and pollution

Douglas' work was based largely on 'primitive' societies and attempts to demonstrate the strong parallels between these and industrial societies. Critical processes of urbanisation and global change have altered the context of anthropology, but the concept of pollution remains as acute in the twenty-first century city. Concepts of pollution in cities are apparent in struggles over space and place, between groups differentiated on the basis of class, ethnicity or religion. Pollution is mediated by these same differentiations and can simultaneously reinforce urban divisions. Aesthetic and moral valuations, based on concepts of cleanliness and dirt, of purity and impurity, are constructed in the sociospatial arena that is the city. Especially in the context of globalisation – more specifically the ethnic diversification of cities, the increasingly contested power of the nation-state and the strengthening of local identities – social groups have a heightened tendency to perceive both their identities and access to resources as at risk. A dominant way of framing these threats is in terms of cultural pollution. As territorial borders appear to lose their salience or become increasingly porous, cultural borders are policed that much harder.

Mass migration, involuntary displacements and other territorial movements intensify anxieties with regard to pollution and the construction of physical and cultural boundaries. The fortification of cultural boundaries is accomplished by portraying outside influences as an invasive threat that will contaminate the 'pure' ethnonational entity. As Scanlan (2005: 182) notes, 'every act of differentiation produces garbage'. Ethnic groups, often new migrant groups but indigenous peoples as well (see Trnka, this volume), tend to be depicted as dirty and different. When the new presence of certain groups threatens existing ethnic configurations and social hierarchy, it may be tempting to portray this menace as one to the physical environment and public health. Defensive local or national identities are conveyed in environmental terms, while the protection of economic and territorial interests may be based on claims of (ethnic or national) purity and authenticity. Religious interpretations of pollution may intersect with these processes of identity formation, contrasting the pure, sacred and clean with the impure, profane and contaminated.

The mutually constitutive notions of cultural pollution and purity draw on ideas of a pre-existing, natural order that determines who and what belongs where. In this defining of the 'native' and the 'foreign', cultural identities become naturalised and humans are perceived as joined to a particular habitat. Belonging becomes a static concept that is inscribed in a specific territory and defined by a natural or ecological law (Olsen 1999; Comaroff and Comaroff 2001).[2] This geographical and cultural space must be protected from intrusive foreigners who will contaminate the 'natural' order. Invasive outsiders are perceived as harmful pollutants, besieging the territory and usurping its resources. Social distinctions are established by the 'native' group, who actively ascribe the intruders with alterity, whether in ethnic, linguistic or environmental terms. Changes in language and food are prominent examples of issues around which such debates revolve (Harrison 1999).

Cultural pollution is a key concept in nation-building processes; the imagined nation depends on ideas of ethnic or cultural homogeneity and leaves little room for blurred categories. The nation-state is envisioned, organically, as a body politic of varying robustness which is prone to, and

2. The specifically natural character of these people-place bonds is reflected in the use of horticultural metaphors describing 'rooted' identities, family 'trees and branches' and, of course, diaspora, which literally translates to 'spreading the seeds' (Ballinger 2004: 50). Such ecological imageries reveal the equation of social and environmental pollution as it is invoked by radical right wing environmentalists (Olsen 1999) and point to the intertwining of 'race' and nature as a terrain of power evident in cultural politics (Moore et al. 2003). Additionally, such usages, of course, hark back to the ecological terminology used by Chicago School urban sociologists.

must be protected against, pollution. The most extreme instance of how the concept of pollution is employed in militant national identities and their representations is the notion and practice of 'ethnic cleansing' – from the Holocaust to Rwanda and former Yugoslavia – in which deportation and genocide are posed as solutions to cultural pollution. Under the Nazi regime, cities such as Vienna or Warsaw from which the Jewish population had been forcefully removed would be pronounced *Judenrein*, clean of Jews (see Bauman 2002: 119–120). The purity associated with the homogeneous nation is manifested in a variety of spatial configurations. Malkki (1995), for instance, describes the narratives of purity and pollution as applied by Hutu refugees in Tanzania in order to legitimate claims to the nation. Cultural pollution also figures as a political rhetoric rejecting so-called western influences in non-western societies, expressed for instance in the concern over cityscapes transformed by the mushrooming of US fast food chains or 'McDonaldisation'. But this finds its parallel in 'autochthonous' objections to architectural signifiers of ethnic diversity in European cities, such as ethnic restaurants, mosques, halal butchers and phone houses.

The city itself is also imagined as a body politic and a corporal entity. Bodily metaphors are common in thinking of the city: flows and processes constitute an urban 'metabolism', certain areas are the 'beating heart', traffic and people 'pulsate' along urban streets, rivers or canals that function as the city's 'arteries'. This organism can be sick, wounded or polluted, or indeed robust and healthy (Harvey 2003; Goldberg 1993). The city itself, especially as unchecked urban sprawl, can take the shape of a cancerous growth, while neighbourhoods within a city are regarded as blighted and architectural objects are sores on the urban landscape.

The politics of public health

From the outset of urban research, dirt, filth and pollution have figured as prominent topics (cf. Chadwick 1842; Booth 1902–3). A considerable body of Victorian era literature was concerned with urban industrialisation and the associated living conditions of factory workers, who often resided in overcrowded quarters. Hygiene, sanitation and fear of contagion became important issues in city life. In a context of both rapid urban expansion and advances in medical science, urban overcrowding and filth were increasingly constructed as problematic through their association with disease. The nineteenth century was the backdrop for the rise of the sanitary reform movement, arising from concern for the urban poor but, at least as important, the economic need to ensure a healthy workforce. Infrastructural improvements – the provision of water and sanitation services – were combined with legal and administrative measures such as public health ordinances. Sanitation and public health reform expanded to

a global movement which sought to combat health hazards but also cure social ills in European, American and colonial cities, based on a paradigm which associated poverty, pollution and disease (Strasser 1999). The combined eradication was to be achieved through combining technical and administrative measures with moral and educational strategies. The humanitarian and economic impulses that shaped such campaigns were accompanied by a strong moral imperative. If cleanliness is next to godliness, dirt is the devil. Dirt was, and is, often conflated with degeneracy. A physically dirty body, residence or public space is often associated with a certain moral decay. In this vein, sanitary reformers sought to instil civilisation and order in the lives they were saving from disease and poverty.

The civilising mission – driven by 'ideologies of cleanliness' (Gandy 2004) – had similar implications in cities throughout the world. Campaigns to eradicate diseases and cleanse cities of filth were often discriminatory in nature and reinforced existing social and ethnic hierarchies and power structures. Dirt and filth served as markers of racial and national distinction and had class and gender implications (Cohen 2005: xxvi). For instance, perceptions of pollution included connotations with sexuality and immorality, as gendered constructions of sexual deviance and 'disorderly' female bodies involved moral condemnation in terms of filth, dirt, and defilement (cf. Russo 1995; Bashford 1998). With regard to maintaining class distinctions within the urban arena, pollution and rituals of purification have been used in a variety of shifting ways. Odour for instance – extending into the social realm from a dominant discourse that focused on urban sanitation – took on significance in eighteenth and nineteenth century Paris, as a means of the deodorised bourgeoisie to distinguish themselves from the smelly masses (Corbin 1986). Similarly, in modern-day Buenos Aires, the middle-class – its socioeconomic position precarious due to neoliberal restructuring – differentiate themselves from the (ethnically distinct) urban poor, by framing the latter as a barbaric force that pollutes the city and threatens its modernity (Guano 2004). Chaplin (1999) makes a comparison between cities in contemporary India and mid-nineteenth century Britain. The politics of British sanitary reform, driven by middle-class fear of disease and social revolution, eventually led to environmental services being extended to the urban poor. The modern Indian middle-classes have less to be afraid of as modern medicine and civil engineering allow them to remove themselves from sanitary interdependency, while a large part of the population is excluded from access to basic urban services.

Colonial cities, particularly those in Africa, implemented a *cordon sanitaire* between indigenous and colonial sections of town in attempts to simultaneously curtail epidemics and impose racial delineations. Fear of infectious disease, not always equally grounded in medical fact, served as

a rationale for the creation and later maintenance of racialised urban space within urban planning (Goldberg 1993: 48). As King (1990: 55) notes, 'the culture and class-specific *perception* of health hazards more than the actual health hazards themselves was instrumental in determining much colonial, urban-planning policy'. In the Philippines in the early twentieth century, public health reform enabled the medical production of colonial bodies and spaces. Grotesque, defecating Filipino bodies were contrasted with civilised, hygienic American ones. For American colonial health officers, human waste practices became the ordering principle by which to draw social and racial boundaries that validated US domination. This form of justification allowed in particular colonial control of urban public space, such as the marketplace and the fiesta (Anderson 1995). Racial, moral and sanitary discourse become intertwined, especially when residential segregation suggests maintainable ethno-spatial boundaries, for instance, in the case of Vancouver's Chinatown (Anderson 1991). In San Francisco, diseases such as tuberculosis and smallpox were used as political tools to construct physical and cultural boundaries and restrict spatial relations. Health policy determined social, physical and symbolic restructurings of the city, targeting the poor and ethnic minorities, specifically the Chinese community. Measures such as quarantine replicated the colonial *cordon sanitaire*, and testify to a continued construction of diseases as produced by place and categories of people, rather than by bacteria *per se* (Craddock 2000; Shah 2001).

Epidemics have often served as a validating context for the imposed ordering of public and private life in cities, with sick bodies either expelled from the urban environment in 'rituals of exclusion' or isolated and quarantined within 'disciplinary diagrams' that involve the division and control of urban space (Foucault 1977). Separating the pure and the impure involves the maintenance of spatial boundaries, ranging from the human skin as a barrier, to the isolation of patients in sanitoria and leper colonies, to defending the integrity of the national 'geobody' through immigration policy (Bashford 2004). Health concerns – and the need for information on which to base state intervention – lie at the root of early partitions and classification of urban space, including the census tract as an example of government-defined urban geography (Krieger 2006). Spatial management continues to be central to public health strategies and social medicine up to the present day, given the surveillance and environmental control involved.

Pollution and progress

While public health remains a strong pretext for restructuring urban space, tropes such as progress, civilisation and modernity are invoked with equal success. The civilising mission evident in both colonial and more recent

sanitation and public health campaigns demonstrates how the absence or removal of urban pollution – however defined – is interpreted as a sign of progress, up into the postcolonial era. Sanitised, 'civilised' spaces figure prominently in ideologies of development and modernity. On the one hand, these beliefs are driving forces in processes of urbanisation and suburbanisation. Conversely, such ideologies are apparent in municipal policies ranging from slum clearance to the policing of public space.

Cities remain the loci of progress and modernity and the concept of global cities posits urban areas as sites where one finds the highest degree of order, logic, efficiency and the highest concentration of financial, political and cultural power. Such powerful, efficient, prestigious places cannot be reconciled with social or physical pollution. Where economic growth is linked to industrial activity and urbanisation, economic progress is generally accompanied by increased pollution within the city.[3] Yet, a society's progress towards 'civilisation', 'modernisation' or 'development' tends to be defined by the absence of – tangible, visible, smellable – pollution. Unobtrusive underground sewers that replace malodorous cesspits are seen as a mark of urban progress; and garbage collectors often come before dawn, in part to avoid daytime traffic, but presumably also to remove garbage and its disposal from plain sight and daily life. Modernisation is symbolised by cleanliness – the spaces of the global economy must be shiny and clean – but making the flipside of this prosperity and process go away calls for significant acts of conjure. A lot of 'dirty work', executed by hordes of inconspicuous cleaners, goes into removing and concealing the waste involved in contemporary production, consumption and social reproduction (Herod and Aguiar 2006).

As in Foucault's scheme, spatial strategies of urban control can involve separation (remove the pollutants from the city) or segmentation (divide, classify and regulate pollutants within the city) or a combination of the two. Until today, municipal governments throughout the world attempt to physically remove 'dirty', 'backward' or non-modern objects, people or entire neighbourhoods in the name of progress. Unplanned neighbourhoods or slums are seen as disfiguring the modern urban landscape and removed; street vendors are harassed for the sake of cleanliness and progress; homeless people removed. In 1999, a truckload of homeless people were transported from the Jamaican tourist town of Montego Bay, and abandoned in a remote area (Amnesty International 2001: 29–35). In a number of Indian cities, Mumbai included, authorities

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3. This ecological degradation following economic expansion can be seen as the urban form of the 'second contradiction of capitalism', by which relations and forces of production and accumulation paradoxically destroy the social and material conditions of production on which they depend (O'Connor 1988).

rounded up beggars and homeless people on a nightly basis, transporting them out of the city. A 2003 news story reported plans by Thai authorities to remove thousands of homeless people from the streets of Bangkok in anticipation of a summit of world leaders. Cambodian beggars were repatriated, stray dogs were removed and government buildings renovated, as the city removed 'untidy activities' for the benefit of the 'orderliness and prestige of the country'. A high government official explained that 'we do not want our guests to see unpleasant scenes'.[4] In Brazilian cities, police have been notorious for the practice of rounding up and killing street children in 'one version of "urban renewal" ' (Scheper-Hughes 1993: 240).

Such examples of physical removal of un-modern and disturbing pollutants are supplemented by the more complex and sophisticated strategies to divide and regulate cities into modernity. The *Haussmannisation* of Paris in the nineteenth century is seen as emblematic of the project of modernity. Urban planner Baron Haussmann drastically rebuilt the city through widened boulevards, shopping arcades, public squares and monumental government buildings: a rational, modern architecture involving straight lines, efficiency and regulation. The ambition to create the ideal rational city involved displacing the poor from the city centre to the suburbs, reshaping Parisian architecture and public space for purposes of military control, capitalist advancement and bourgeois comfort. Of course, colonial governments and the South African apartheid state developed similar sophisticated planning mechanisms to maintain segregation and urban order in residential location and labour practices. Modernisation merges with pollution control as, in attaining the ideal of the city, 'rational organization must … repress all the physical, mental and political pollutions that would compromise it' (de Certeau 1984: 94).

In the twenty-first century, modernising urges and associated grand plans continue. Tomic et al. (2006) show how in Chile, neoliberal governments under Pinochet and his civilian successors made conscious efforts to conflate hygiene and cleanliness with modernity and development. In Santiago and other urban areas, 'sanitary landscapes' emerge as spaces of modernity; the government and the private sector maintain shopping malls, elite educational institutions and corporate skyscrapers as clean spaces emblematic of modernisation. Simultaneously, they establish clean, modern corridors of mobility – highways, streets, the train system – to link them. This spatial technique, not unique to Chile, results in the severing of connections with the 'dirty' spaces of alleged

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4. Asian Economic News, 6 October 2003.

social and economic backwardness and exacerbates the urban fragmentation associated with neoliberal reform.

Urban order and security

The control exerted over urban space in the name of health care and progress points to the close relationship between pollution and urban order. Security is the sphere in which the connection between the two is perhaps most apparent. Pollution is associated with both symbolic and physical danger, in the form of violence, crime or health threats. Chaos, crime and violence are contrasted with order and safety in urban discourse that implicitly or explicitly draws on concepts of pollution. Cities in the popular imagination have often figured as dystopias, where pollution and turmoil reign. These chaotic, decadent, free-for-all spaces stand in contrast to the peaceful, unsullied character of rurality. Indeed, cities have always been depicted as having a weaker social and public order than rural areas, witnessed by individualisation, diversity and diminished social control. These factors may in fact be necessary to foster the freedom and creativity that make cities successful and attractive. Yet one of the paradoxes of the city is that both national and municipal governments have generally sought to counteract this disorder in efforts to establish and display their power. Owing to its central and symbolic position, the city is the site of many material manifestations of power – architecture, statues, parades and so on. Indeed, the more fluid character of the urban social order requires these manifestations as continuous assertions and demonstrations of power by those who wish to remain in control. In a time of global change and insecurity, urban policy discourse focuses increasingly on creating and maintaining urban order, in which, again, the social and the material are conflated.

The politics of urban order draw strongly on the issue of security, ridding the city of chaos, crime and violence. The concept of order connects morality, health and crime and is often used in reference to particular urban locations. Public behaviour deemed immoral by authorities can be suppressed in the name of safeguarding the public. Pollution is crucial in narratives of urban order and security. Avoiding or dispelling pollution involves ensuring that boundaries are not crossed, which in turn implies the need for literal and figurative policing of urban space and behaviour. Urban governments impose order on public space, in implicit or explicit attempts to create or maintain clean and safe cities. The measures meant to achieve urban security are diverse but include the organising, surveying and controlling of urban space and the elimination or segregation of urban elements that are conceptually polluting.

Garbage has become metaphor for laziness, moral dissolution and the abandonment of virtue. Those who live outside of visible social

conventions and 'waste away' time, or their lives, are themselves characterised as (white) trash, wasters or scabs (Scanlan 2005). Prostitution, for instance, is often referred to in terms of pollution, defilement and sexual threat, and spatially, such activities are confined to red-light districts or expelled to marginal urban areas. Hubbard and Sanders (2003: 79) highlight how descriptions of red-light districts combine 'metaphors of sexual morality, environmental degradation, criminality and disease', while the identities of the sex workers are 'constructed through discourses of pollution and defilement'. They go on to demonstrate how spatial arrangements of deviance help to naturalise and cement the social order, notwithstanding tactics that resist dominant representations of urban space. This kind of moral geography, which involves the 'locating of impropriety', relies on collective constructions of social relations in public spaces (Dixon et al. 2006). Such shared constructions of place-behaviour bolster the dominant urban order and are employed by authorities in attempts to provide security.

Spatial grids of morality often become overlaid with class and ethnic divisions, as poor and ethnically distinct 'pollutants' are segregated and associated with danger. The ghettos formed by these divisions and exclusions become known as aggregates of poverty and deviance and are depicted as sources of potential contamination to other, untainted urban areas. Repressive policies that amount to the 'penalization of poverty' combine the enforcement of public order with the enforcement of the class order and ethnoracial hierarchies (Wacquant 2003). Urban design intended to improve security is often reliant on keeping out the raced or classed Other and maintaining purity through various spatial tactics. In general, such security strategies tend to limit freedom – of movement, expression or assembly – for some, while perhaps increasing it for others. Consequently, providing the security for some urban inhabitants will mean curtailing the liberty of others. The pollutants that threaten urban order can take on any number of forms and vary depending on the context: littering, urinating, smoking, spitting, loud music and graffiti may or may not be constructed as symbolic markers that threaten urban order.

As, in an age of global neoliberalism, cities become more polarised and the powers of municipal authorities are weakened, citizens have differential access to urban security based on their sociospatial position within the urban entity. Combined with declining trust in the police or social control, a preventive restructuring of urban space emerges, witnessed by the spread of gated communities and other instances of privatised public space and privatised governance. Cultures of control seek to eliminate risks by redistributing dangers throughout urban space (Franzén 2001; Low 2003). Paradoxically, security measures themselves involve the crossing of boundaries and the invasion of private spaces, for example, when police searches intrude on the integrity of the body or the

private home, or when digital and camera surveillance constitute invasions of privacy (Staples 2000). The age of terrorism has heralded many new instances of restrictive measures promising increased security through an emphasis on order, backed by strategic 'fear management'. Cities are seen as obvious and vulnerable targets and as a response, urban space throughout the world is increasingly subject to mechanisms of surveillance and regulation. This strategy allows authorities to draw on the anxieties of citizens while validating their use of power in removing dangerous urban 'pollutants'. A small paradoxical way in which the link to material pollution is apparent is the removal of many rubbish bins in the centre of London, beginning with the IRA attacks of the 1970s, for fear of their potential as bomb receptacles.

Material pollution

Pollution and cultural value

In examining material forms of urban pollution, it is useful to make a distinction between the production and removal of garbage, sewage and other forms of waste. An analysis of the production of pollution requires definition of what objects or emissions constitute this category. Defining pollution implies a number of oppositions. The primary pair is that of purity and impurity as social constructions, described in detail above. However, pollution as waste also implies value and uselessness as central characteristics in defining what constitutes waste. Michael Thompson's *Rubbish Theory* (1979) addresses the latter form of categorisation, examining the relation between garbage and cultural value in an age of consumerism, where status is related not so much to what one possesses but to what one is able to discard. As a student of Mary Douglas, Thompson's concern is with cultural categorisation, though more specifically with objects[5] and their social processing. He sees first a categorisation of possessable objects as either valuable, valueless or negatively valued. He then distinguishes between transient and durable object categories. Transient objects have a limited life-span and decrease in value over that period, while durable objects can increase in value and ideally have an infinite life-span. However, these two types are accompanied by a third covert category of objects, namely that of rubbish: objects that are of zero and unchanging value. The different categories are, of course, socially constructed and enjoy porous boundaries; transient

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5. Ultimately, the categories proposed in rubbish theory extend beyond objects to people and ideas as well.

objects slowly fade into rubbish but can then be transferred to the durable category. Following this categorisation, an object, for instance a vase, will lose value over time and will at a certain point be considered valueless rubbish. Yet the vase can shift from the rubbish category if it becomes revalued as an antique or a museum piece.

Value is a main determinant in the categorisation of what is garbage and what is not. The consumerism that has become endemic in many contemporary societies relates to this, in that accumulation goes hand in hand with disposal. Producers eschew the durable, preferring a system of 'planned product obsolescence' (Packard 1961) that ensures continued consumption and simultaneously waste production. Despite widespread awareness of the short and long term problems associated with visible and invisible pollution, and with management of the burgeoning mountains of waste, there appears to be what amounts to a 'conspiracy of blindness' (Thompson 1979), an unspoken agreement to collectively ignore certain forms of pollution. De Coverley et al. (2003) demonstrate how consumers are able to systematically disregard the garbage they produce. They found that the garbage bin, the bin men and socialisation against litter constitute three systems that allow people to avoid contemplating waste and their own role in its production. The garbage bin and the bin men obscure rubbish by swallowing it up and whisking it away, while opposition to litter – and, one might speculate, engaging in recycling activities – allows one to see oneself as a responsible citizen with regard to waste. Such mechanisms allow waste removal to remain 'back-stage' while supporting the consumerist nature of daily life.

Waste and stigma

A variety of 'technologies of expulsion' (Scanlan 2005: 122), from the most basic to the most advanced, exists in the field of waste removal. This practical business of removing waste – garbage and wastewater in particular – cannot be seen separately from the division of labour, cultural practice and gender constructions, and socioeconomic differentiation. Waste management and removal are generally seen as unpleasant activities. In everyday life they are widely perceived as male responsibilities, and professionally, the stigma attached to occupations related to waste seems universal. While this holds true for both formal and informal sector workers, the latter are generally subject to a larger degree of opprobrium. In many contexts, waste workers have a different ethnic background from the larger population. In India, garbage removal is often the domain of Dalits, or 'untouchables', in Muslim countries waste workers are often non-Muslims (Beall 2006). The occupational category tends to correlate with low socio-economic status, though the work itself may, in certain circumstances, be quite lucrative. A feedback loop of social

reproduction maintains the socio-ethnic differentiation involved – 'dirty' jobs associated with the removal of waste are assigned to low status, ethnically differentiated groups and their association with pollution continues their distinction as low status Others.

The socio-cultural associations between physical, material pollution and certain groups of people have spatial consequences. The spaces in which people live, work and spend their leisure time are also categorised in terms of pollution and they reflect on the people who move in and through them. Polluted areas can suffer from what Drackner (2005) refers to as 'social contagion': polluted streets or neighbourhoods reflect on their residents who may, in certain cultural contexts, be seen as 'dirty' or 'nasty' people on account of their surroundings. This often entails some causal confusion. Poor and polluted neighbourhoods are classified as dirty because of the polluting, 'unhygienic' or 'asocial' poor people who live there.

Stigmatisation of the poor can be employed as a legitimation of their environmentally degraded urban areas. Rather than considering their unsanitary living and working conditions as a result of a weak socio-economic position, their 'nastiness' and concomitant social inferiority may be portrayed as the cause of their poverty. This sometimes morphs into 'blame the poor' discourse and policies. As often as not, the neighbourhoods are polluted because socially disadvantaged people do not receive environmental services and infrastructure such as solid waste collection and adequate sewage systems. Neighbourhood poverty often entails a lower level of the political and financial clout necessary to obtain – publicly or privately provided – environmental services or to fend off polluting industries. As Thompson (1979: 35) asserts, 'slums are socially determined … such physical, physiological, and economic considerations as poor living standards, lack of services and amenities, poor health, dampness, inadequate light, inadequate cooking facilities, overcrowding, high fire risk, whilst real enough are essentially the by-products of a concealed social process. They are the effects, not the cause.'

A proliferation of garbage is configured as a symbolic message, the urban 'text' of a dirty person, house, street or neighbourhood being read as signifying a lack of virtue. Garbage as an urban marker is used to distinguish urban segments and guide mobility. Small (2004: 102) speaks of the 'ecology of group differentiation', by which an area's spatial features become inextricably associated with class or ethnic features. This process reinforces differences between residents and nonresidents and spatialises boundary work, the construction of group differentiation and mutual exclusion discussed in the previous part of this introduction. In many cities, litter, graffiti and boarded-over, crumbling housing have become symbolic indicators of poverty, crime and violence. Environmental psychologists also find strong links between social and physical disorder, crime and fear of crime. These causal relationships are expressed in the so-called 'broken windows' thesis (Wilson and Kelling 1982). This theory

posits that if a window in a building is broken and remains unrepaired, the other windows will soon be broken too, as the community and potential offenders interpret the non-repair – the disorder – as a sign that no one cares. Urban disorder is also manifest in 'standard' environmental problems, specifically garbage on the streets. Open sewers, substandard or abandoned housing, derelict cars and vandalised infrastructure are other conceivable environmental manifestations of urban disorder. However, as shown in the first part of this chapter, the perception of disorder is not only a matter of an objective level of cues in the environment. Rather, disorder is filtered by pre-existing ideas about certain groups and areas; a neighbourhood's racial, ethnic, and class composition shapes the perception of disorder (Sampson and Raudenbush 2004). Consequently, garbage appears to be dirtier and more visible when it is in an area occupied by a stigmatised group. The official neglect of such areas and their 'anti-social' tenants by 'slumologists' (Damer 1989) in municipal government can create self-fulfilling prophecies of environmental decay.

Urban political ecology and environmental justice

There are, then, various real and imagined associations between material pollution and marginalised and stigmatised urban groups, be they socio-economically, ethnically or otherwise differentiated. As noted above, when areas associated with particular groups are polluted, it is often because the inhabitants are denied environmental services and infrastructure. In addition, their marginal position means they are more likely to be the recipients of environmental 'bads', through their disproportionate exposure to industrial and traffic-related air pollution, proximity to (toxic) waste storage and disposal sites or employment in the most polluted and hazardous urban workplaces. A topical way of addressing this correlation between – and indeed, mutual constitution of – urban pollution and social inequality is through the theoretical lens of urban political ecology. Combining human ecology and political economy, political ecology studies human-environment relations in the context of politics and uneven power relations. It challenges apolitical studies of environmental change, critically examining dominant environmental narratives and exploring alternative socio-environmental arrangements (Robbins 2004: 12, cf. Keil 2003). Urban political ecology does this for the city, offering a critical understanding of relationships between urban power and pollution and the environmental implications of socio-economic, ethnic or gender inequalities. Discrimination on the basis of class, gender and ethnicity is linked to environmental degradation, while health and power differentials determine which groups of residents bear the brunt of urban pollution.

The most obvious division is that of class: the urban poor generally suffer most from exposure to pollution. In the past few decades, cities throughout

the world have been submitted to neoliberal changes in the style of 'entrepreneurial' governance, characterised by a penchant for public-private partnerships in which local government focused on investment and economic development, and gave economic and political priority to the speculative construction of place over improving conditions within a specific territory (Harvey 2002). Despite the prominence of municipal policies, processes of urban privatisation – in environmental services, housing, security, education – and the emergence of gated communities in cities North and South expose governments' failure to provide citizens with a clean and safe environment. In the US, such processes have been exacerbated by suburbanisation and the concomitant flight of tax money from inner-cities, which result in both a strain on environmental infrastructure and services as urban sprawl and edge cities formed, and underinvestment and declines in infrastructure and services in the inner-city (Melosi 2000). Throughout the world, privatisation of basic services and of security, following neoliberal restructuring, results in cities where a safe and healthy environment is available at a price that not everyone can pay.

Spatialised urban divisions between rich and poor, resulting in and expressed by different levels of exposure to pollution, are compounded by gender inequalities. The gendered effects of environmental degradation in rural areas are well-documented, but urban women similarly suffer an unequal share of urban environmental problems. Given that in many cities throughout the world women have little political voice, they are disadvantaged in environmental decision-making, resulting in policies with a male bias. McGranahan et al. (2001: 130–156) demonstrate how, in the Ghanaian capital of Accra, micropolitics of power within the household and the neighbourhood result in greater environmental burdens and risks for women. A gendered division of urban labour means that household environmental problems such as air pollution from inadequate cooking and heating facilities affect cooks, caregivers and cleaners – predominantly female – the most. Moreover, the nature of labour in urban export-processing zones in low-wage countries, following global restructuring of production, mean that young women in particular are exposed to polluted and unhealthy workplaces (Doyal 2004). It becomes evident that urban divisions of power along gender lines find environmental expressions.

Socio-economic divisions often correlate with specific ethnic groups. Environmental racism is evident in the disproportionate concentrations of water, noise or air pollution and hazardous waste, especially when encountered in non-white neighbourhoods in predominantly white cities (Haughton 2004). Differential access to certain types of environmental facilities or services is one manner in which pollution becomes racialised. In Johannesburg, the legacy of apartheid is apparent in the highly uneven distributions of type of toilet, source of domestic water and energy source for cooking between African, Coloured, Indian and White groups (Beall et

al. 2002: 155–6). In many cities in the United States, locally unwanted land uses (LULUs) – waste incinerators and toxic storage and disposal facilities – are disproportionately sited in or near African American or Latino residents (Pastor et al. 2001). Such discriminatory siting practices on the part of urban authorities – possible because of minorities' relative lack of political power – reveal the pervasiveness of environmental racism. While not necessarily an expression of malicious intent, 'white flight' to suburbs removed from older urban industrial zones exacerbates racialised environmental injustice (Pulido 2000).

Exposure of such ecological expressions of racism triggered collective action in the form of a social movement. In the 1980s, the environmental justice movement emerged as a branch of the North American environmental movement, redefining environmentalism to encompass poverty, inequity and the spatial distribution of environmental hazards. Environmental justice proved an effective frame for mobilising support for this specifically urban social movement. It focused on 'how discrimination results in humans harming each other, how racial minorities bear the brunt of the discrimination, and how discriminatory practices hasten the degradation of environments' as well as investigating 'corporate and governmental environmental behavior and the effects of those actions on the aggrieved communities' (Taylor 2000: 523).

Environmental movements and the politics of environmentalism

The environmental justice movement is one social movement specifically geared to address urban pollution and its relation to power and inequality. However, the larger North American environmental movement also displays a preoccupation with industrial pollution in particular. While the focus of the environmental movement has since shifted towards global issues such as climate change, pollution was initially the rallying issue, or collective action frame (Snow and Benford 1992), that enabled environment activists to mobilise on a large scale. Whether in terms of environmental justice for the environmentally disadvantaged urban poor, or in the context of middle-class suburbanites' NIMBY (not-in-my-back-yard) action, urban pollution features worldwide as a driver for community mobilisation and collective action (Evans 2002; Castells 1997: 110–33).[6]

Douglas and Wildavsky (1982) explain the emergence of environmentalism in the United States by focusing on fear of pollution,

6. Conversely, traditional conservationist discourses within environmentalism are also strongly invested in the 'purification' of nature (see e.g. Head and Muir 2006). Within such discourse, both 'nature out of place' (pests, exotic and genetically modified species) and 'non-nature' (humans, and particlary urban humans) are seen as pollutants that should preferably be removed from 'pure' or authentic nature (wilderness, endemic/indigenous species, etcetera).

arguing that environmental pollution in industrial societies is the functional equivalent of fear of ritual pollution in traditional societies. The function of 'modern' pollutants is similar in that they serve to protect the moral order. As in *Purity and Danger*, Mary Douglas concludes that environmental problems entail not only or primarily visible damage or specific health threats. Rather these environmental and technological risks, like dirt, are culturally constructed imageries related to purity, anxieties surrounding threats to the moral order. Environmentalism as a social movement must find new threats, new forms of pollution, to keep its activist members together. This kind of 'eschatological ecofatalism' (Beck 1992: 37) involves apocalyptic environmental narratives that posit activists as saviours (Hawkins and Muecke 2003).

This take on environmentalism has come under heavy critique, mainly as its strong constructionist character was seen to dispute the reality of environmental problems (Hannigan 2006: 110). However, the line of thought does point to a connection between pollution and the emergence of the risk society, associated with industrial and scientific development. This type of society is concerned not so much with the distribution of goods as with the distribution of (environmental) 'bads' (Beck 1992). This distribution of environmental bads, as noted previously, tends to work out to the disadvantage of those urban residents who wield the least power and often live and work in the most polluted parts of cities. Risk societies also tend to be accompanied by a generalised movement towards cultures of control, a tendency evident in the regulatory nature of many government strategies that aim to curb environmental risks.

As in all policy, power relations find expression in pollution control and management policies. Environmental policies, legislation and regulations can be seen as expressions of power, favouring the economic or social interests of specific parties over those of others. Equally, environmental movements generally display a political dimension. In Europe and the United States, environmentalism was entwined with other 'new social movements', including students, peace and women's movements (cf. Goodbody 2002), while contemporary environmentalist discourses may link to human rights struggles or indigenous movements. Environmentalists have often displayed an anti-establishment position and questioned established power relations by calling attention to the rights of future generations and socially marginalised groups (see Kerényi, this volume). However, environmentalism itself has become established and institutionalised in a variety of forms, lending the movement power in arenas ranging from local planning forums to global governance mechanisms. Moreover, the social movement has played a key role in terms of producing the environmental knowledge on which politics and policies are based. The articulation of environmental issues and 'eco-knowledge' within this range of institutional regimes can be viewed as

discourses that shape citizens' understandings of the environment, thus affirming the power and knowledge of those institutions.

Following Foucault's concept of governmentality, as a discursive means of disciplining political subjects, these processes of instilling environmental consciousness and creating environmental subjects are described as 'environmentality' (Luke 1995; Agrawal 2005). As Jamison (2001: 17) alleges, 'an ecological consciousness … is in the process of being internalised in our cultures and our personalities'. Both governmental and non-governmental environmental organisations may be complicit in these discursive forms of environmentalist control, as they craft strategies that will raise environmental awareness and create environmentally conscious citizens. Discourses of urban pollution, then, also shape the way urban inhabitants see themselves and their surroundings, and influence how they think, speak, and act with regard to the urban environment. In some instances, urban actors will operate within a discourse that emphasises human-environment relations in terms of equity and justice, in other instances sanitation and morality will determine how actors define themselves in relation to the environment.

Garbage aesthetics

While pollution is repelling to most, and provokes reproving words and decisive action, it is appealing to others. Various forms of arts – poetry, cinema, painting, sculpture – have displayed a preoccupation with garbage. Many 'recycling artists' worldwide have transformed garbage – also known in this context as *objets trouvés*, or 'found objects' – into art. In 2001, Damien Hirst famously created an installation artwork, which consisted of empty beer bottles, coffee cups and discarded cigarette butts. Displayed in London's Eyestorm Gallery, a janitor failed to note that this was artistic garbage and swept it up. Gallery staff salvaged parts of the installation from rubbish bins and recreated it on the basis of photographs that had been taken earlier. A similar misunderstanding affected part of 'Recreation of First Public Demonstration of Auto-Destructive Art', a work by Gustav Metzger on display in London's Tate Britain gallery. The work featured a plastic garbage bag filled with paper and cardboard, which was also discarded by museum cleaners; it was subsequently replaced with a new bag. In art as in life, garbage relates to power struggles. In Brazil, the *cinema do lixo* or garbage cinema of the 1960s and 1970s, produced by the Undigrundi (Underground) movement, was framed with reference to local and international power relations, shocking bourgeois sensibilities and allegorising Brazil's marginal role as a Third World country (cf. Xavier 1997). Rubbish has also occupied a noteworthy place within literature. With regard to poetry, Haughton (2002) shows the centrality of garbage and its relation to margins and order in the work of Irish poet Derek

Mahon, akin to how Don DeLillo's American novel *Underworld* underlines the centrality of garbage as the shadow world created by modern life and consumerism. Early twentieth-century literary works often used garbage as pessimistic metaphors of decay and desolation, while later literature more frequently uses rubbish to critique the hyperconsumption and futility of affluent societies.

Conclusion

In conclusion, pollution means many things to many people. In this introduction, we have attempted to give an overview of themes relating to urban pollution, concentrating on cultural and material forms of pollution. We have examined how Mary Douglas' work on cultural pollution extends into the modern day context of globalisation and increasingly fluid cultural practices. Pollution is invoked as a reaction to insecurity and perceived cultural threats, or to bolster hegemonic orders, as witnessed by imperial and contemporary discourses on sanitation, civilisation, modernity and order. Cultural pollution is brought into play in urban space to establish or reinforce power relations, and this involves various forms of control of urban places and the people who inhabit them. The same interplay of power and pollution can be observed when studying material forms of pollution. Both the production and removal of waste involve expressions of power: influential actors determine what objects are considered valueless waste, less powerful actors end up responsible for the concrete disposal of this discarded matter. Within the city, the urban poor and other marginalised social groups bear the brunt of pollution, and social movements seek to address such environmental inequality but sometimes end up crafting their own exclusive regimes of environmental knowledge. Artists, finally, try to invert reality by turning garbage into art or using it as a social critique.

Structure of the book

Given the themes described in this introduction, studying urban pollution from a social science perspective appears to primarily concern practices of power in urban space, with a variety of discourses of pollution featuring in these practices. The contributions to this volume link pollution and environmental degradation to contemporary work in urban studies. They study how cultural pollution is reconfigured and figures in the (post)modern city, and how it intersects with space and power. The different chapters draw on fieldwork conducted in various cities around the globe, presenting a broad geographical range of varied cultural, natural and spatial contexts. The contributions include cases from

traditional 'pollution studies' areas such as India and Indo-Fijians, as well as less familiar urban cases from 'industrialised areas' such as New Zealand and Central Europe. They explore the variety of cultural definitions and social constructions of nature, purity, cleanliness and pollution, and connect these to the spatialised workings of social differentiation and power in local urban arenas.

Following this introduction, the contributions draw both on cultural and material understandings of urban pollution. Some case studies focus explicitly on the mutual constitution of material and symbolic pollution; other chapters emphasise the specific meanings attributed to pollution in the context of urban and national relations between different ethnic, religious and socio-economic groups; and some take material pollution in cities as a starting point, indicating the inclusive and exclusive strategies to combat it, and the complex of power underlying waste production and removal in urban space.

Studying the social life of garbage in creating and countering narratives of social pollution, while pointing out how social distinctions do pollution 'work' on material objects, Eveline Dürr's contribution is based on the case of Auckland, New Zealand. Recent decades have seen an increase in migration from Asia that has significantly altered the demographic composition of the city. In the context of urban multiculturalism, identities are renegotiated in environmental terms. The perceived lack of environmental consciousness amongst Asian immigrants is employed in identity politics and nation-building strategies that contrast clean, green 'Kiwis' with 'dirty' ethnically distinct migrants. Damaris Lüthi implies a similar combination of symbolic and material categories in a study of religious definitions of cleanliness and how these inform polluting practices in Kottar, India. Drawing on religiously delineated dichotomies of public and private space, Kottar residents believe that neglecting personal hygiene and polluting indoor spaces will lead angry deities to punish the individual by inflicting disease or poverty. In contrast, polluting the outdoor, public environment is not associated with divine wrath and consequently is regarded as less hazardous.

The next three chapters privilege symbolic forms of pollution, linking them to urban negotiations of ethnicity, gender and class in contexts of contention and at times violence. Susanna Trnka examines Indo-Fijian perceptions of clean and dirty in relation to the urban and the jungle. Despite increasing environmental degradation, urban spaces are conceptualised as the essence of cleanliness through their association with wealth, modernity and development. This is related to politically contentious discourses of historical Indo-Fijian involvement in developing Fiji and clearing the 'jungle', which in turn is seen as wild, violent and uncivilised, and is associated with indigenous Fijians. Anouk de Koning describes contentious discourses of pollution of both urban spaces and the

space of the gendered body in neoliberal Cairo, Egypt. She describes how young female professionals' spatial practices of mobility and consumption – including their presence in coffee shops, streets and public transport – are framed in terms of pollution. Class configurations and gender ideologies are renegotiated through the strategic movement of middle-class female bodies through urban space. Magnus Treiber studies similar processes in another context of urban social change. He demonstrates how the youth of Asmara, Eritrea differentiate between 'clean' and 'dirty' bars and hangouts, a distinction which reveals responses to the war-torn country's poverty and violence. Certain groups associated themselves with the 'clean' spaces, which symbolise safety, comfort, modernity and social exclusivity, while others adopt the dirt and danger of the older, unsanitised locales. Again, these distinctions between urban spaces map out in a gendered fashion on the space of the body.

The final three chapters examine the ways in which urban pollution actively shapes and is shaped by NGO campaigns and public policy. Starting from material pollution but illustrating its effectivity in shaping politics, Szabina Kerényi studies mobilisation around urban pollution in the Hungarian capital of Budapest. The Hungarian green movement is a grassroots movement, developed in opposition to the country's communist past but now splintered into a diversity of sub-sectors and actors. Pollution however, remains a central issue that can act as a crucial mobilising factor for the movement. Johanna Rolshoven's contribution examines Swiss, and more broadly European, policies that aim to increase control over public urban space, analysing the ideologies and power relations that underlie such policies. In practice, order, safety and cleanliness are achieved through the removal of unwanted persons, rather than garbage alone, disregarding the positive effects of chance encounters and a certain randomness in public space on urban liveability. Kathryn Scott, Angela Shaw and Christina Bava show the clash of government and resident discourses on the physical environment and urban order in an Auckland suburb, in an urban planning context. Low socioeconomic status, high rates of crime and a degraded physical environment made it the target of consecutive urban programmes. Official city-wide development strategies related to housing and urban design do not necessarily take into account local stakeholder definitions of well-being: resident and professional discourse and practice diverge on topics of pollution, urban order and sustainability.

These ethnographic examples presented in this volume illuminate the various ways in which urban pollution is conceptualised, by bringing together forms of cultural and material pollution and simultaneously stressing the fluidity and hybridity of these dynamic categories. They enrich our analytical approaches towards urban pollution and reveal the multiple ways in which it can be understood and addressed.

References

Agrawal, A. 2005. 'Environmentality: Community, Intimate Government, and the Making of Environmental Subjects in Kumaon, India', *Current Anthropology* 46 (2): 161–90.

Amnesty International. 2001. *Jamaica: Killings and Violence by Police: How Many More Victims?* Report No.: AMR 38.001.2001. London: Amnesty International Secretariat.

Anderson, K.J. 1991. *Vancouver's Chinatown: Racial Discourse in Canada*, 1875–1980. Montreal & Kingston: McGill-Queen's University Press.

Anderson, W. 1995. 'Excremental Colonialism: Public Health and the Poetics of Pollution', *Critical Inquiry* 21 (3): 640–69.

Aoyagi, K., P.J.M. Nas and J.W. Traphagan (eds) 1998. *Toward Sustainable Cities: Readings in the Anthropology of Urban Environments*. Leiden: Leiden Development Studies.

Ballinger, P. 2004. ' "Authentic Hybrids" in the Balkan Borderlands', *Current Anthropology* 45 (1): 31–60.

Bashford, A. 1998. *Purity and Pollution: Gender, Embodiment and Victorian Medicine*. London: Macmillan Press.

——— 2004. *Imperial Hygiene: A Critical History of Colonialism, Nationalism and Public Health*. New York: Palgrave Macmillan.

Bauman, Z. 2002. 'Modernity and the Holocaust' in *Genocide: An Anthropological Reader*, A.L. Hinton (ed.), pp. 110–33. Oxford: Blackwell.

Beall, J. 2006. 'Dealing with Dirt and the Disorder of Development: Managing Rubbish in Urban Pakistan', *Oxford Development Studies* 34 (1): 81–97.

Beall, J., O. Crankshaw and S. Parnell. 2002. *Uniting a Divided City: Governance and Social Exclusion in Johannesburg*. London: Earthscan.

Beck, U. 1992. *Risk Society: Towards a New Modernity*. London: Sage Publications.

Booth, C. (ed.) 1902–1903. *Life and Labour of the People in London*. 17 volumes. London: Macmillan.

Bullard, R.D. 2000. *Dumping in Dixie: Race, Class, and Environmental Quality*. Boulder: Westview Press.

Castells, M. 1997. *The Information Age: Economy, Society and Culture. Vol. II: The Power of Identity*. Oxford: Blackwell.

Chadwick, E. 1842. *Report on the Sanitary Condition of the Labouring Population of Great Britain*. Edinburgh: Edinburgh University Press.

Chaplin, S.E. 1999. 'Cities, Sewers and Poverty: India's Politics of Sanitation', Environment and Urbanization 11 (1): 145–58.

Checker, M. 2001. '"Like Nixon Coming to China": Finding Common Ground in a Multi-Ethnic Coalition for Environmental Justice', *Anthropological Quarterly* 74 (3): 135–46.

——— 2005. *Polluted Promises: Environmental Racism and the Search for Justice in a Southern Town*. New York and London: New York University Press.

Cohen, W.A. 2005. 'Introduction: Locating Filth' in *Filth: Dirt, Disgust, and Modern Life*, W.A Cohen and R. Johnson (eds), pp. vii–xxxvii. Minneapolis: University of Minnesota Press.

Comaroff, J. and J.L. Comaroff. 2001. 'Naturing the Nation: Aliens, Apocalypse, and the Postcolonial State', *Social Identities* 7 (2): 233–65.

Corbin, A. 1986. *The Foul and the Fragrant: Odor and the French Social Imagination*. Cambridge, Mass.: Harvard University Press.

Craddock, S. 2000. *City of Plagues: Disease, Poverty, and Deviance in San Francisco*. Minneapolis: University of Minnesota Press.

Damer, S. 1989. *From Moorepark to 'Wine Alley': The Rise and Fall of a Glasgow Housing Scheme*. Edinburgh: University of Edinburgh Press.

de Certeau, M. 1984. *The Practice of Everyday Life*, trans. S. Rendall. Berkeley, Los Angeles and London: University of California Press.

de Coverly, E., L. O'Malley and M. Patterson. 2003. *Hidden Mountain: The Social Avoidance of Waste*. Nottingham: International Centre for Corporate Social Responsibility. ICCSR Research Paper No. 08–2003.

Dixon, J., M. Levine and R. McAuley. 2006. 'Locating Impropriety: Street Drinking, Moral Order, and the Ideological Dilemma of Public Space', *Political Psychology* 27 (2): 187–206.

Douglas, M. 2002 [1966]. *Purity and Danger: An Analysis of Concept of Pollution and Taboo*. London: Routledge.

Douglas, M. and A. Wildavsky. 1982. *Risk and Culture: An Essay on the Selection of Technological and Environmental Dangers*. Berkeley: University of California Press.

Doyal, L. 2004. 'Women, Health and Global Restructuring: Setting the Scene', *Development* 47 (2): 18–23.

Drackner, M. 2005. 'What is Waste? To Whom? An Anthropological Perspective on Garbage', *Waste Management & Research* 23 (3): 175–81.

Evans, P. (ed.) 2002 Livable Cities? *Urban Struggles for Livelihood and Sustainability*. Berkeley: University of California Press.

Foucault, M. 1977. *Discipline and Punish*: The Birth of the Prison, trans. A. Sheridan. New York: Pantheon Books.

Franzén, M. 2001. Urban Order and the Preventive Restructuring of Space: The Operation of Border Controls in Micro Space, *The Sociological Review* 49 (2): 202–18.

Gandy, M. 2002. *Concrete and Clay: Reworking Nature in New York City*. Cambridge, MA: MIT Press.

Gandy, M. 2004. 'Rethinking Urban Metabolism: Water, Space and the Modern City', *City* 8 (3): 363–79.

George, T.S. 2001. *Minamata: Pollution and the Struggle for Democracy in Postwar Japan*. Cambridge: Harvard University Asia Center.

Gille, Z. 2007. *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Post-Socialist Hungary*. Bloomington: Indiana University Press.

Goldberg, D.T. 1993. 'Polluting the Body Politic: Racist Discourse and Urban Location' in *Racism, the City, and the State*, M. Cross and M. Keith (eds), pp. 45–60. New York: Routledge.

Goodbody, A. (ed.) 2002. *The Culture of German Environmentalism: Anxieties, Visions, Realities*. Oxford: Berghahn Books.

Guano, E. 2004. 'The Denial of Citizenship: "Barbaric" Buenos Aires and the Middle-Class Imaginary', *City and Society* 16 (1): 69–97.

Hajer, M.A. 1995. *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford: Oxford University Press.

Hall, S. (ed.) 1997. *Representation: Cultural Representations and Signifying Practices*. London: Sage.

Hannigan, J. 2006. *Environmental Sociology*, 2nd edn. London and New York: Routledge.

Harrison, S. 1999. 'Cultural Boundaries', *Anthropology Today* 15 (5): 10–13.

Harvey, D. 2002 [1989]. 'From Managerialism to Entrepreneurialism: The Transformation of Urban Governance in Late Capitalism' in *The Blackwell City Reader*, G. Bridge and S. Watson (eds), pp. 456–63. Oxford: Blackwell.

——— 2003. 'The City as Body Politic' in *Wounded Cities*: *Destruction and Reconstruction in a Globalized* World, J. Schneider and I. Susser (eds), pp. 25–44. Oxford and New York: Berg.

Haughton, G. 2004. 'Environmental Justice and the Sustainable City' in *The City Cultures Reader*, M. Miles, T. Hall and I. Borden (eds), pp. 461– 74. New York: Routledge.

Haughton, H. 2002. ' "The Bright Garbage on the Incoming Wave": Rubbish in the Poetry of Derek Mahon', *Textual Practice* 16 (2): 323–43.

Hawkins, G. 2005. *The Ethics of Waste: How We Relate to Rubbish*. Lanham, MD: Rowman & Littlefield.

Hawkins, G. and S. Muecke, (eds) 2003. *Culture and Waste: The Creation and Destruction of Value*. Lanham: Rowman & Littlefield.

Herod, A. and L.L.M. Aguiar, 2006. 'Introduction: Cleaners and the Dirty Work of Neoliberalism', *Antipode* 38 (3): 425–34.

Head, L. and P. Muir. 2006. 'Suburban life and the boundaries of nature: resilience and rupture in Australian backyard gardens', *Transactions of the Institute of British Geographers* 31 (4): 505–24.

Heynen, N., M. Kaika and E. Swyngedouw, (eds) 2006. *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*. London: Routledge.

Hubbard, P. and T. Sanders. 2003. 'Making Space for Sex Work: Female Street Prostitution and the Production of Urban Space', *International Journal of Urban and Regional Research*, 27 (1): 75–89.

Inda, J.X. and R. Rosaldo. 2008 [2002]. 'Tracking Global Flows' in *The Anthropology of Globalization: A Reader*, J.X. Inda and R. Rosaldo (eds), pp. 3–46. Malden: Blackwell.

Jamison, A. 2001. *The Making of Green Knowledge: Environmental Politics and Green Transformation*. Cambridge: Cambridge University Press.

Kaika, M. 2005. *City of Flows: Modernity, Nature and the City*. London and New York: Routledge.

Keil, R. 2003. 'Urban Political Ecology', *Urban Geography* 24 (8): 723–38.

King, A.D. 1990. *Urbanism, Colonialism, and the World-Economy: Cultural and Spatial Foundations of the World Urban System*. London and New York: Routledge.

Krieger, N. 2006. 'A Century of Census Tracts: Health & the Body Politic (1906–2006)', *Journal of Urban Health* 83 (3): 355–61.

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

Law, J. 1999. 'After ANT: Complexity, Naming and Topology' in *Actor Network Theory and After*, J. Law and J. Hassard (eds), pp. 1–14. Oxford: Blackwell.

Low, S. 2003. *Behind the Gates: Life, Security and the Pursuit of Happiness in Fortress America*. New York and London: Routledge.

Luke, T.W. 1995. 'On Environmentality: Geo-Power and Eco-Knowledge in the Discourses of Contemporary Environmentalism', *Cultural Critique* 31: 57–81.

Malkki, L.H. 1995. *Purity and Exile: Violence, Memory, and National Cosmology among Hutu Refugees in Tanzania*. Chicago: University of Chicago Press.

McGranahan, G., P. Jacobi, J. Songsore, C. Surjadi and M. Kjellén. 2001. *The Citizens at Risk: From Urban Sanitation to Sustainable Cities*. London: Earthscan.

McKean, M.A. 1981. *Environmental Protest and Citizen Politics in Japan*. Berkeley: University of California Press London.

Melosi, M.V. 2000. *Sanitary City: Urban Infrastructure in America from Colonial Times to the Present*. Baltimore: Johns Hopkins University Press.

Moore, D.S., J. Kosek and A. Pandian. 2003. 'Introduction: The Cultural Politics of Race and Nature: Terrains of Power and Practice' in *Race, Nature, and the Politics of Difference*, Donald S. Moore, Jake Kosek and Anand Pandian (eds), pp. 1–70. Durham and London: Duke University Press.

Nguyen, V.-K. and K. Peschard. 2003. 'Anthropology, Inequality, and Disease: A Review', *Annual Review of Anthropology* 32: 447–74.

O'Connor, J. 1988. 'Capitalism, Nature, Socialism: An Introduction', *Capitalism, Nature, Socialism* 1 (1): 11–38.

Obrist, B., M. Tanner and T. Harpham. 2003. 'Engaging Anthropology in Urban Hralth Research: Issues and Prospects', *Anthropology & Medicine* 10 (3): 361–71.

Olsen, J. 1999. *Nature and Nationalism: Right-Wing Ecology and the Politics of Identity in Contemporary Germany*. New York: St. Martin's Press.

Packard, V. 1961. *The Waste Makers*. London: Longman.

Pastor, M., J. Sadd and J. Hipp. 2001. 'Which Came First? Toxic Facilities, Minority Move-In and Environmental Justice', *Journal of Urban Affairs* 23 (1): 1–21.

Pellow, D.N. 2002. *Garbage Wars: The Struggle for Environmental Justice in Chicago*. Cambridge, MA: MIT Press.

Pulido, L. 2000. 'Rethinking Environmental Racism: White Privilege and Urban Development in Southern California', *Annals of the Association of American Geographers* 90 (1): 12–40.

Robbins, P. 2004. *Political Ecology: A Critical Introduction*. Oxford: Blackwell.

Russo, M. 1995. *The Female Grotesque: Risk, Excess, and Modernity*. New York: Routledge.

Sampson, R.J., and S.W. Raudenbush. 2004. 'Seeing Disorder: Neighbourhood Stigma and the Social Construction of "Broken Windows" ', *Social Psychology Quarterly* 67 (4): 319–42.

Scanlan, J. 2005. *On Garbage*. London: Reaktion Books.

Schell, L. M. and M. Denham. 2003. 'Environmental Pollution in Urban Environments and Human Biology', *Annual Review of Anthropology* 32: 111–34.

Scheper-Hughes, N. 1993. *Death Without Weeping: The Violence of Everyday Life in Brazil*. Berkeley and Los Angeles: University of California Press.

Shah, N. 2001. *Contagious Divides: Epidemics and Race in San Francisco's Chinatown*. Berkeley and Los Angeles: University of California Press.

Small, M.L. 2004. *Villa Victoria: The Transformation of Social Capital in a Boston Barrio*. Chicago: University of Chicago Press.

Snow, D.A. and R.D. Benford. 1992. 'Master Frames and Cycles of Protest' in *Frontiers in Social Movement Theory*, A.D. Morris and C.M. Mueller (eds), pp. 133–55. New Haven: Yale University Press.

Staples, W.G. 2000. *Everyday Surveillance: Vigilance and Visibility in Postmodern Life*. Lanham: Rowman and Littlefield.

Strasser, S. 1999. *Waste and Want: A Social History of Trash*. New York: Metropolitan Books.

Swyngedouw, E. 2004. *Social Power and the Urbanization of Water: Flows of Power*. Oxford: Oxford University Press.

Taylor, D.E. 2000. 'The Rise of the Environmental Justice Paradigm: Injustice Framing and the Social Construction of Environmental Discourses', *American Behavioral Scientist* 43 (4): 508–80.

Thompson, M. 1979. *Rubbish Theory: The Creation and Destruction of Value*. Oxford: Oxford University Press.

Tomic, P., R. Trumper and R.H. Dattwyler. 2006. 'Manufacturing Modernity: Cleaning, Dirt, and Neoliberalism in Chile', *Antipode* 38 (3): 508–29.

Wacquant, L. 2003. 'Toward a Dictatorship Over the Poor? Notes on the Penalization of Poverty in Brazil', *Punishment and Society* 5 (2): 197–205.

Wilson, J.Q. and G.L. Kelling. 1982. 'The Police and Neighbourhood Safety: Broken Windows', *The Atlantic Monthly* 127: 29–38.

Xavier, I. 1997. *Allegories of Underdevelopment: Aesthetics and Politics in Modern Brazilian Cinema*. Minneapolis: University of Minnesota Press.