

At a green crossroads: recent theses in urban environmental history in Europe and North America

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Since the path-breaking work of prominent North American historians such as Joel Tarr and Martin Melosi, as well as more recent roundtables in Europe, urban environmental history is now a mature research field, at the intersection of various related approaches.¹ Time has passed since a leader of environmental history, William Cronon, could write that 'cities in particular deserve much more work than they have received'.² In this field, urban history necessarily crosses with environmental history, but also with the history of technology and social and cultural history; whilst its scholars not only emanate from a traditional historical background, but also from geography, science and engineering. Urban environmental historians, as they are referred to here, have duly established the importance of studying the relationships between 'nature' (including non-humans) and humans in and around cities. This 'nature' is a complex and shifting entity: recent doctoral studies have, for instance, documented rivers transformed by human action, weeds growing in the spatial and social margins of cities and tidal wetlands progressively filled in and built upon. The recently completed Ph.D.s reviewed in this essay see the built environment more as a hybrid of natural elements, like water, plants, animals and human action. Aided by the environmental lens, the scope of the urban historian has also been broadened by studying the ways in which residents' lives were transformed by the invention, spread and environmental impact of new technologies, as well as the political responses to environmental crises.³

¹ See, for example, J.A. Tarr, *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective* (Akron, OH, 1996); M.V. Melosi, *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present* (Washington, DC, 1999); D. Schott, B. Luckin and G. Massard-Guilbaud (eds.), *Resources of the City. Contributions to an Environmental History of Modern Europe* (Aldershot, 2005); F.-J. Brüggemeier, M. Cioch and T. Zeller (eds.), *How Green Were the Nazis? Nature, Environment, and Nation in the Third Reich* (Athens, OH, 2005).

² W. Cronon, 'Modes of prophecy and production: placing nature in history', *Journal of American History*, 76 (1990), 1131.

³ This helps explain why industrial pollution remains a popular topic amongst historians: P. Thorsheim, *Inventing Pollution: Coal, Smoke, and Culture in Britain Since 1800* (Athens,

Nevertheless, the core strength of urban environmental history is its chief weakness: it generally remains a marginal theme in international conferences and journals hosted by both urban and environmental history associations, even if it has had special issues devoted to the subject.⁴ Drawing on a dozen works from both side of the Atlantic, this review essay aims to identify and assess four existing and emerging trends in the field: first, the relationship between urban societies and elements of 'nature' in the urban environment; secondly, the management of public health crises and the fight against urban industrial pollution; thirdly, the disciplinary connections between urban environmental history and the history of technology and cultural history; and, finally, emerging efforts to integrate social and environmental issues into the historical study of the city.

The role of 'nature' in the urban environment

Environmental history seeks to bridge the gap between the natural sciences, which underestimate the role of mankind in reshaping landscapes and even species, and the social sciences, which have conventionally overlooked the ecological consequences of human history. This has not been an easy task. Urban environmental historians, in particular, struggled in the late 1980s and early 1990s to convince their peers in environmental history that they should consider the city as an environment on equal terms with the countryside or the wilderness. In so doing, urban environmental historians have also faced the challenge of defining the parameters of urban and suburban environments. What is urban? What is 'natural'? When does the town become the countryside? Urban environmental history forces the scholar to transcend what have traditionally seemed obvious categories, notably the dichotomies of urban and rural, and unnatural and natural landscapes. As Jim Clifford puts it in his thesis, 'A wetland suburb on the edge of London: a social and environmental history of West Ham and the River Lea, 1855–1914' (York University, Toronto, 2011), West Ham – but the same could be said of many places – was 'not an urban, rural or natural space; it was a hybrid of the three: a wetland suburb' (p. 12).

Investigation of the history of urban rivers and the relationship between urban society and water is a particularly active direction of recent research. As a popular subject, the history of industrialized, harnessed rivers is now well-illustrated through many European and American case-studies.⁵ Exploring the relationship between an urban society and its rivers enables

OH, 2006); S. Mosley, *The Chimney of the World: A History of Smoke Pollution in Victorian and Edwardian Manchester* (London, 2008); G. Massard-Guilbard, *Histoire de la pollution industrielle: France, 1789–1914* (Paris, 2010).

⁴ J.A. Tarr and C. Meisner Rosen, 'The importance of an urban perspective in environmental history', *Journal of Urban History*, 20 (1994), 299–310; G. Massard-Guilbard and P. Thorsheim, 'Cities, environments, and European history', *Journal of Urban History*, 33 (2007), 691–701.

⁵ For example, C. Mauch and T. Zeller (eds.), *Rivers in History* (Pittsburgh, 2008).

the historian to narrow his or her view and take a broader chronological framework, often from the late eighteenth century to the present. This is the case with Jennifer Bonnell's 'Imagined futures and unintended consequences: an environmental history of Toronto's Don River Valley' (University of Toronto, 2010). In her thesis, Bonnell writes a 'microhistory of human-environment relationships on a small urban river' (p. 17), from the time when the Don was central to the economic and social development of York (later Toronto), to the projects for re-naturalizing the river during the environmentalist era of the late twentieth century. Among her central arguments lies the dialectic between perceptions of the river and the types of uses and modifications to which it was subject over time. Aided by her extensive use of non-traditional primary sources (newspapers and personal diaries over city council minutes and reports by city engineers and medical officers of health), such perceptions are not only about pollution and uses of the river; they also conceptualize the shift of the Don's place in the mental landscape of Toronto dwellers over time. Thus, the second half of the nineteenth century marked a shift towards the river being conceived as an 'urban wasteland' (p. 92) and subsequent efforts have been tailored to redressing this negative picture. Still further, a more conceptual approach is discernible in Jeremy Wayne Hubbell's 'Minneapolis: urban-environmental change in the Upper Mississippi, 1824-1924' (Stony Brook University, 2007). His thesis is structured around various landmarks of environmental history, such as the domestication of waterfalls, the creation of parks and the relationship between the city and its hinterland, which were equally physical and discursive constructions, for 'physical change and mental change went hand in hand' (p. 303).

The links between the cultural and physical characteristics of the urban environment are also explored by Zachary Falck's 'Controlling urban weeds: people, plants, and the ecology of American cities, 1888-2003' (Carnegie Mellon University, 2004).⁶ Falck examines how people and plants have interacted and reshaped cities over more than a century and contends that 'urban weeds are common plants that are of uncommon usefulness in understanding the history of twentieth-century American cities' (p. 369). This project led him to study not only the place and role of nature in the city, but the perceptions and meanings assigned to weeds in evolving cultural contexts. During the 'Progressive Era', advocates of urban weed control perceived the plants as threats to the health, beauty and efficiency of the city. Later, during the first half of the twentieth century, the nascent science of plant ecology and the existence of urban weeds even influenced sociological and scientific thinking about cities. Post-war weed control used herbicides and accompanied urban growth in the fight against weeds along roads, railroads and other public rights of way in city hinterlands. Meanwhile, progress in medical research and pharmacology

⁶ A published version is available: *Weeds: An Environmental History of Metropolitan America* (Pittsburgh, 2010).

allowed city governments better to control allergic reactions caused by hay fever plants. By the 1960s, though, weeds were still considered a blight on American cities. For example, the proliferation of weeds in vacant inner-city lots alarmed suburbanites who worried that overgrown land might devalue their own property, which masked wider social fears about immigration, poverty and de-urbanization.⁷

In 'Real estate and refuge: an environmental history of San Francisco Bay's tidal wetlands, 1846–1972' (Stanford University, 2005), Matthew Booker chooses the region as his unit of scale, going back and forth between San Francisco and the rest of the bay. His second chapter provides an intriguing examination of the transformation of tidelands in booming mid-nineteenth-century San Francisco. The legal status of these marshes was unclear, since they possessed certain characteristics of both the sea and land. However, the private appropriation of these lands allowed for a real estate speculation. Early San Franciscans had to adapt to this liminal environment, filling in the water lots of the tidelands to build warehouses, piers and streets. In writing the history of a relationship between people and their surrounding environment, Booker highlights how the city-building phenomenon can be re-examined through an urban environmental lens. Moreover, the earthquakes of 1906 and 1989 dramatically reminded the city's inhabitants of nature that had long been forgotten, hidden under roads and concrete. When, for instance, engineers mapped the 1906 damage from seismic activity, the curved lines they drew closely followed the former shoreline. Taking the same city, albeit with a different emphasis, Joanna Dyl's 'Urban disaster: an environmental history of San Francisco after the 1906 earthquake' (Princeton University, 2006) focuses more exclusively on the effects of natural disasters on San Francisco and its inhabitants. For example, she explains the links between the environmental and social characteristics of the city's rapid growth and recovery, on the one hand, and the plague epidemics that struck San Francisco before (1900–04) and after the 1907–08 earthquake. Dyl argues that the events of the earthquake and subsequent fire accelerated changes that signalled the replacement of the 'organic city' – where animals freely moved around the urban space – with the modern city in which, for example, concrete was seen as the solution to prevent the plague's return. Rebuilding the urban environment was seen as the means to make it inhospitable to rats. These changes, nonetheless, had crucial consequences for the working poor and immigrants. To exile animals (horses, cows, fowl and rabbits) from the urban environment meant a more expensive daily life for people, while the effect of these restrictions on the cycle of city manure fertilizing rural gardens further artificially separated the urban from the rural.

⁷ Falck's approach thereby shines a new spotlight on the history of the late twentieth-century notion of 'shrinking cities'. See P. Oswalt (ed.), *Shrinking Cities*, vol. I (Berlin, 2005); P. Oswalt (ed.), *Shrinking Cities: Interventions*, vol. II (Berlin, 2006).

Public health, urban pollution, and technological landscapes

The second great trend that can be identified from recent Ph.D.s is an interest in the history of the urban environment as a matter of interaction between man, technology and 'nature'. Martin Melosi's path-breaking study of American urban sanitation, *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present*, has proved to be very influential over a variety of vistas from Finland to Italy and Portugal, and topics ranging from the history of water supply systems to the invention and proliferation of sewage disposal methods and waste treatment plants. This is illustrated by Barry Johnson's 'Wastewater treatment comes to Detroit: law, politics, technology and funding' (Wayne State University, 2011) and Angela Gumm's 'Waste, energy and the crisis of confidence: the American people and the history of resource recovery from 1965 to 2001' (Iowa State University, 2010). Joanna Dyl also examines the drive towards the modernization of sanitary services and, in particular, garbage disposal that was triggered by the 1907 plague in San Francisco. Johnson's work is a classic case-study of how the enormous growth of the 'Motor City' during the early twentieth century caused major environmental pollution, in particular of the Detroit River and the Great Lakes. Although Detroit's sewage crossed various local and national boundaries to become a multi-scale issue, polluting intrastate, interstate and international waters (under the terms of the joint 1909 Boundary Waters Treaty between the United States and Canada), the city was never sued by neighbouring authorities; nor did they ever search for a metropolitan solution to the problem. Gumm's thesis, based on three case-studies (St Louis, Baltimore and Ames, Iowa) is mainly the story of the failure of 'resource recovery' initiatives in the second half of the twentieth century, where local authorities had to cope with the pressures of an increasingly consumerist society, in the context of, first, environmental legislation passed by Richard Nixon's administration followed by, secondly, budget cuts under Ronald Reagan.

Urban sanitation infrastructures were primarily designed to improve public health rather than to prevent ecological decay or damage to fish species. Bacteriology was not a 'pre-ecological' movement because it was almost exclusively anthropocentric and rarely extended to the care of the environment once human health was secured. Some diseases, nevertheless, were not caused by bacteria and yet remained linked to the environment. This was the case with yellow fever, spread by the city-dwelling *A. aegypti* mosquito and studied in Urmi Engineer's thesis, 'Hurricane of the human frame: yellow fever, race, and public health in nineteenth-century New Orleans' (University of California Santa Cruz, 2010). Engineer melds medical, environmental and global history to elaborate the narrative of yellow fever presence in Louisiana's largest city. Specific historical circumstances, such as the federal occupation during the Civil War, went hand-in-hand with sanitation practices, quarantine measures and

preventative methods to play a crucial role in the fall in epidemics between 1860 and 1877. Economic trends also mattered, as the decline in sugar production was also related to yellow fever epidemics. In accounting for the rise and fall of a tropical disease in New Orleans, Engineer sets the city in its regional environment and, more broadly, in a worldwide network of commodities and workforce practices.

The history of urban sanitation practices and technologies is not confined to North America. My own thesis, 'Les réseaux de la modernité. Amélioration de l'environnement et diffusion de l'innovation dans la France urbaine, fin XIXe siècle-années 1950' ('The networks of modernity. Environmental improvements and diffusion of innovations in urban France from the end of the nineteenth century to the 1950s', Université Lyon 2, 2009), explores the decision-making processes in French cities of various sizes, from regional metropolises such as Lyons to smaller provincial towns and seaside resorts, from the rise of sanitary engineering in the late nineteenth century to the mid-twentieth century. What appears is a 'chequered history'⁸ in the implementation of waste water and garbage treatment systems. While an 'out of sight, out of mind' logic prevailed for liquid and solid waste, the public health attention paid to the quality of drinkable water led some small cities and towns to experiment with innovative devices including artificial water purification systems.

Histories of environmental pollution do not focus exclusively on the modern period. Dolores Jorgensen's 'Private need, public order: urban sanitation in late medieval England and Scandinavia' (University of Virginia, 2008) provides a fresh perspective on the interaction between municipal authorities, urban dwellers and the environment. The management of latrines and cesspits for the public good, 'the control' of urban livestock and the regulation of polluting industries were crucial issues for medieval city leaders, as has been documented by public records and archaeological evidence. In a similar way to my own research which encompassed both world wars, Jorgensen crosses traditional scholarly boundaries, namely that between the 'late medieval' and 'early modern' eras. The chronological timeline for urban environmental issues is thus shown as distinct from conventional political histories. Even more challenging is the articulation between the periodization of scientific knowledge and that of political events. Thomas Le Roux's thesis on Paris, 'Les nuisances artisanales et industrielles à Paris, 1770–1830' ('The crafts and industrial nuisances in Paris, 1770–1830', Université Paris I, 2007),⁹ is a remarkable illustration of an *histoire totale* of industrial pollution, taking into account its various technical, social, economic and political aspects. He studies a particularly rich history, including the shift from the regulation of nuisances by the *ancien régime* police

⁸ Melosi, *The Sanitary City*, p. 276.

⁹ An abridged version has since been published: *Le laboratoire des pollutions industrielles. Paris, 1770–1830* (Paris, 2011).

in Paris to a new legislative framework, more favourable to industry, enacted after the French Revolution. Prominent chemists and statesmen, such as Jean-Antoine Chaptal, profited from the post-revolutionary political impasse by making heavy chemical manufacturing durable and protecting entrepreneurs and capital invested in the new ventures from any neighbourhood action against alleged industrial nuisances. Le Roux identifies the period from 1770 to 1830 as heralding a fundamental mutation that made people and urban authorities accept industry and its nuisances, pollutions and risks. Nevertheless, the optimistic views of Parisian public health officials were not shared by all French physicians and local authorities; progressively the 1810 Napoleonic decree was turned into a more balanced arbitration tool between the different interests.

New vistas for studying city environments: technology and culture

In addition to the theses already reviewed, there is a growing sub-field of works, which, although they are not immediately recognizable as urban topics, contribute to urban environmental history's thinking. For instance, the history of technology has done much more than force historians to put pollution problems in their historical perspective. Rather, a new trend can be identified in the study of 'energy landscapes' and the evolution of the 'energy metropolis'.¹⁰ In 'Energy landscapes: coal canals, oil pipelines, electricity transmission wires in the mid-Atlantic, 1820–1930' (University of Pennsylvania, 2009), Christopher Jones follows a path initially furrowed by William Cronon in de-centralizing the focus outside the city *per se* and on to the wider metropolitan region.¹¹ Jones examines the infrastructure connecting rural energy sites with urban centres of consumption, which has allowed for the development of a society dependent on fossil fuel energy, with city dwellers using it to heat their homes, power factories, transport goods and travel between places by automobile. For Jones, history should not only investigate processes of innovation, but also the social effects of technologies over their entire lifecycle.

Cultural history also highlights the importance of the urban environment in the development of conservation or preservation policies, as well as for the nascent environmental organizations of the late nineteenth century. Charles-François Mathis's 'L'émergence d'une pensée environnementale en Angleterre au XIXe siècle' ('The emergence of environmental thought in nineteenth-century England', Université Paris-Sorbonne, 2006) represents this trend, focusing on a wide array of sources,

¹⁰ M.V. Melosi and J. Pratt (eds.), *Energy Metropolis: An Environmental History of Houston and the Gulf Coast* (Pittsburgh, 2007).

¹¹ W. Cronon, *Nature's Metropolis: Chicago and the Great West* (New York, 1991).

literary and artistic, as well as parliamentary reports.¹² Mathis pays attention to the role played by nineteenth-century English smoky cities during a time when emerging environmentalists were looking to preserve green spaces and the countryside from uncontrolled urbanization. Meanwhile, Jeremy Hubbell, focusing on Minneapolis (which originally translates as ‘waterfall city’), takes a culturally inflected approach by carefully scrutinizing the myths and imagery of its river environment, like the Upper Mississippi’s cataracts around St Anthony Falls, which were refashioned by the city’s boosters in the second half of the nineteenth century into a source of hydropower for the region’s sawmills, textile mills and flourmills.

Sunnier and warmer than the places studied by Mathis and Hubbell, California has long been a favoured research field, studied among others by Lawrence Culvert in ‘The island, the oasis, and the city: Santa Catalina, Palm Springs, Los Angeles and Southern California’s shaping of American life and leisure’ (University of California Los Angeles, 2004). Claiming to locate his dissertation ‘at the intersection of cultural, urban, and environmental history’ (p. 2), even if he mainly situates his study within the historiography on tourism, Culvert explores the relationship between the promotion of leisure in Southern California and the urban growth of Los Angeles, arguing that it played an important role in changing American perceptions of nature and in shaping twentieth-century suburbia. He later examines the segregation of recreational space, in a city that was much more ethnically diverse than most American eastern and southern cities in the early twentieth century. Although paying for their public purchase in the 1920s, African Americans were banned from almost all beaches in Los Angeles County. After World War II, some political leaders began to see parks as a way to ameliorate racial conflicts. Nevertheless, in the 1960s, the city that had once sold itself as a kind of ‘city in a garden’ lagged behind other major cities regarding standards of recreational space. In addition to illustrating the appeal of the Californian example in environmental history,¹³ this case-study illustrates the increasing attention paid by young scholars to environmental justice and social inequalities in their historical perspective.

Social issues matter: exploring urban environmental inequalities

Though few of the theses reviewed explicitly assume an ‘environmental justice’ historical perspective, environmental inequalities appear in a

¹² This has also subsequently been published as *In Nature We Trust. Les paysages anglais à l’ère industrielle* (Paris, 2010).

¹³ In France, Elsa Devienne is currently preparing a Ph.D. thesis on ‘Beaches in the city: the making of Los Angeles urban beaches, 1927–1972’, EHESS, Paris.

number of recent case-studies,¹⁴ and represent one of the few overlapping themes between environmental and social history.¹⁵ For example, the history of disasters reveals that the level of vulnerability and physical damage to the built environment is frequently unequally distributed in urban society. Studying the 1906 San Francisco earthquake, Matthew Booker reminds us that destruction was concentrated in the waterfront areas and the working-class tenements built on marshy ground south of Market Street, whereas the wealthy residential districts perched on the rocky heights experienced little damage. Joanna Dyl, investigating the plague that struck the city a year later, affirms that among the working-class and poor districts, recent immigrants were most susceptible to both the disease and official efforts to reconstruct the urban environment to counter its spread. Furthermore, Jim Clifford contends that flood-prone regions with high concentrations of industrial pollution, such as West Ham, housed some of the most socially disadvantaged groups in late nineteenth-century London. Differences can also be noted and mapped inside this borough: the residents who lived on the low ground, near the polluted rivers and industrial development, and in the socially vulnerable neighbourhoods, suffered from higher rates of mortality than those living in the commuter suburbs to the north-east.

Environmental amenities, such as parks and waterfronts, are another crucial element in the social differentiation of urban areas. In 'The nature of gentrification: urban environments and redevelopment in the inland northwest' (Syracuse University, 2010), geographer Jeremy Bryson uses environmental history to examine the relationship between urban greening policies and gentrification in the neighbouring cities of Spokane (Washington State) and Coeur d'Alene (Idaho) since the 1970s. His objective is to highlight the role played by 'natural' dimensions in gentrifying the competitive landscape of 'neoliberal cities'. For example, lake views provided by the transformation of the waterfront in Coeur d'Alene, as well as entailing significant social and environmental reconfigurations, turned it from a place of production to a space of consumption. Such redevelopments evoke the memory of the City Beautiful Movement in Spokane: John Charles Olmsted's 1908 plan – in addition to its 'typical City Beautiful planning elements: the boulevards and parkways, ornamental squares, billboard ordinances, improved street lighting, street trees, and an infusion of urban greenspace' (p. 42) – involved the integration of 'Gorge Park' at the head of Spokane Falls, thereby locking neo-liberal redevelopment into the longer-term history of park planning.

¹⁴ One of the seminal works is A. Hurley, *Environmental Inequalities: Class, Race, and Industrial Pollution Gary, Indiana, 1945–1980* (Chapel Hill, 1995).

¹⁵ S. Mosley, 'Common ground: integrating social and environmental history', *Journal of Social History*, 39 (2006), 915–33. See also G. Masard-Guilbard and S. Mosley (eds.), *Common Ground: Integrating the Social and Environmental in History* (Newcastle, 2011).

In European cities, whose modern history does not carry the same burden of racial segregation as their American counterparts, environmental inequalities are an emerging topic. They are beginning to be included in the traditional domains of social history, such as the relationship between urban elites and their citizens through the democratic process, the rise of new forms of political participation, and the growing political influence of grassroots environmental organizations.¹⁶ Urban environmental historians increasingly seek to explain how environmental issues matter in politics, and Peter Engelke's 'Green city origins: democratic resistance to the auto-oriented city in West Germany, 1960–1990' (Georgetown University, 2011) represents this trend by putting post-1945 urban reformers on the front-stage. Reformers wanted to open up local planning processes so that wider circles of people could participate in making decisions about city-building and post-war reconstruction. Conflict with what Engelke calls 'auto-oriented planning' was about the use of urban space as well as its environmental and social consequences in building the car-friendly city ('*autogerechte Stadt*') in Munich and Erlangen. Put simply, the fight against the technocratic planners aimed to broaden public participation in the planning process, whilst achieving specific goals with the creation of pedestrian zones, traffic calming measures and 'bike-friendly policies' (p. 264) in these cities. The struggle was sharpened by grassroots environmental movements – including the anti-nuclear protests – and was characterized by its 'micro-environmentalism' at the neighbourhood, street and block level. Thus, Engelke follows environmental policies at different scales, from the very local up to the national and transnational levels, and fills the gap between the highpoint of 1960s modernist planning and the sustainable city programmes of the 1990s and 2000s.

Conclusion: new directions

Owing to the pioneering work and tutelage of Melosi, Tarr, Brüggemeier, Schott and Massard-Guilbaud, a new generation of urban environmental historians has emerged over the last decade with new interests and approaches. Whereas earlier studies focused on the environmental and public health crises faced by nineteenth-century cities, as well as the social and technological solutions practised – most notably the sanitary reform programmes of American Progressive Era cities and pollution and nuisance abatement policies of their European counterparts – the Ph.D. theses reviewed in this essay point towards a new direction for research, rescaling downwards from industrial metropolises like Philadelphia and Manchester on to small and middle-sized 'ordinary' cities

¹⁶ For example G. Massard-Guilbaud and R. Rodger (eds.), *Environmental Justice in the City. Historical Perspectives* (Cambridge, 2011).

and extending forwards to examine environmental policy in twentieth-century, but especially post-1945, cities. Indeed, the period between the early 1950s and the 1980s, characterized by urban sprawl in Western cities, urban renewal programmes in North American cities and the beginning of an urban demographic boom in post-colonial Africa and Asia, will certainly provide new arenas for stimulating cross-disciplinary and theoretical dialogues between urban environmental historians and geographers, urban planners, sociologists and political scientists. Interest in the urban environment will also hopefully continue to draw in ancient, medieval and early modern historians. Finally, the weaving of social and environmental perspectives is increasingly popular among this newer generation of scholars, which should help incorporate more 'green thinking' into traditional urban history topics, and more 'human flesh' into environmental history.