

# In conversation with Matthew Gandy

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## JoLA: Could you expand on what you mean by the 'demise of the bacteriological city'?

Matthew Gandy: This is a very complex question! There is certainly a synergy between my use of the term 'bacteriological city' and the related concept of the 'modern infrastructural ideal', developed by Stephen Graham and Simon Marvin. I find the idea of the bacteriological city useful to denote a gathering momentum towards a scientifically grounded conception of the relationship between human health and the physical environment of cities during the last quarter of the nineteenth century. Although the movement towards this 'scientific' conception of urban space was somewhat jagged and contested into the twentieth century, we can identify an emerging degree of coalescence between different professional fields such as epidemiology, engineering, and public administration. If the bacteriological city reaches a kind of zenith in the middle decades of the twentieth century—allied in some respects with the high point for technological modernism—it begins to lose its salience in the final quarter of the twentieth century. There are several reasons for this partial demise: the growing scepticism towards the ability of scientific expertise and various forms of 'scientific politics' to solve urban problems; the problematization of the city as a conceptual totality or 'machine' amenable to various forms of technical management; and the fiscal attrition of the state and the public realm more generally, resulting in a shifting landscape of technical expertise away from architects, engineers, and especially urban planners. In summary I have tried to use the idea of the bacteriological city as a heuristic device to conceptualize several intersecting historical developments. My use of this term should be read as a way of reflecting on patterns of historical periodicity but not in a teleological sense as a marker towards an assumed set of final trajectories or outcomes.

## JoLA: Could you tell us which authors have been most influential for your work on water?

MG: Although many authors have been important for me in thinking through the relationship between water and urban space, I would like to mention three in particular. The geographer Erik Swyngedouw's work has been an inspiration for many years. I recall my first meeting with him in 1998, at The Photographers' Gallery in London. I had recently read his work on the political ecology of Guayaquil in Ecuador and I explained my interest in extending this type of historically based approach to the development of water infrastructure in Lagos. Erik's immediate response was 'Yes! Do it!' His enthusiasm, lack of intellectual cynicism (which is all too pervasive in the contemporary academy) and also generous support for junior colleagues is a particular mark of his approach. Another figure who has been especially important for me is the cultural geographer Denis Cosgrove. Although Denis wrote relatively little specifically about water, his critical reworking of the landscape concept during the 1980s and 1990s remains essential for understanding the symbolic significance of urban space. By moving beyond the limitations of the Sauerian idiographic approach (sometimes referred to as the Berkeley School), he initiated a synthesis of Marxist geography with critical art-historical scholarship, along with other colleagues such as Steve Daniels, that has fundamentally altered how we interpret material landscapes and their multifarious modes of experience and representation. Along with scholars such as Elisabeth Heidenreich, Denis leads us towards the fascinating intersections between infrastructure and landscape, and their complex array of modern and late-modern articulations. I would also add that his work has been significant in countering the parochialism and anti-intellectualism of geography as an academic discipline, along with a commitment to extending interdisciplinary work to the humanities. The third key figure, again not a water specialist, is the French cultural historian Alain Corbin, whose writings have expanded my understanding of the relationship between the body and the changing sensory realm of modernity. Water, in this sense, forms part of the material geography of everyday life and is intimately bound up with the emergence of a more sharply differentiated sense of self during the nineteenth century, with far-reaching implications for the architectonic and hydrological characteristics of urban space.

**JoLA: Thinking ahead to the urban water issues of the twenty-first century what do you consider to be the greatest challenges and opportunities?**

MG: In addition to existing unresolved challenges, such as enabling global access to potable water and sanitation, the impact of climate change is clearly going to be immense. The implications of climate change range from obvious threats such as flooding, water shortages, and disruption to agriculture to more subtle and complex processes such as the changing geography and epidemiology of insect-borne disease. For many engineers climate change necessitates a new set of 'technical fixes', such as immense flood barriers or nuclear-powered desalination plants, but there are also possibilities to combine adaptation strategies with new patterns of land use and public participation. I am interested, for example, in the design of naturalistic floodplains that might afford both a degree of protection against flood risk and also provide new types of 'green spaces' to improve urban quality of life and enhance biodiversity. There is also interesting work on producing new types of alignments between architectural and hydrological space at the level of the individual household or community. Tse-Hui Teh, for example, uses actor-network theory to explore the possibilities for creating different kinds of relationships between people, technology, and water that might reduce current levels of consumption and encourage new forms of socially and environmentally engaged urban citizenship.

**WATER BIBLIOGRAPHY**

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**JoLA: In your 2004 article 'Rethinking Urban Metabolism: Water, Space and the Modern City', the conclusion states: 'Water is a brutal delineator of social power which has at various times worked to either foster greater urban cohesion or generate new forms of political conflict'. Can you expand on the political dimensions to water, particularly in terms of the spatial structure of the city?**

MG: The politics of water raises a myriad of different issues. We can use water as a 'lens' through which urban space can be observed as a functional and interrelated totality. In this sense the flow of water mirrors patterns of inequality and actively intersects with class, caste, gender, and other expressions of socio-economic or ethnic difference. Our analytical strategies can contribute towards a wider reconceptualization of urban politics that challenge fragmentary and techno-managerial paradigms. I would like to emphasize four themes in particular. First, the limits to the 'neo-liberal frontier' in relation to the strategic significance of water for state legitimacy, encompassing not just potable water but also the needs of agriculture, industry, and other sectors. This dynamic raises the question of urbanization in a broader context and reveals how the consumption of specific products such as meat or chocolate hold implications for per capita water use. Second, the emphasis on universal service provision, inherited from the era of the bacteriological city, harbours significant anomalies in terms of bifurcated colonial legacies of infrastructure provision that persist in a contemporary context. Third, the cities of the Global South often experience micro-circuits of exploitation where slum dwellers are deliberately denied access to services by the so-called 'tanker lobbies', the 'water mafia', or other rent-seeking networks. To appreciate the political texture of space, we need to take account of these fine-grained geographies of violence and intimidation that shape the lives of the poor. During my fieldwork in Lagos, for example, I was struck by the difficulties engineers encountered in trying to connect communities in some of the most deprived parts of the city. And fourth, there is a democratic disconnect between infrastructure and the public realm. The era of 'gas and water socialism' that marked the extension of water networks in many European and North American cities has been displaced by a much more dispersed political constellation with more remote patterns of ownership and control. It would be interesting to see whether more inclusive and better informed forms of 'water citizenship' could emerge as part of a wider revitalization of the public realm. Given the immense cost of urban infrastructure, however, and the pervasive economic turbulence within the global economy, the future relationship between water and cities remains highly uncertain.