



Durham
University

Wolfson Research Institute
for Health and Wellbeing

Health, Environment and Architecture

**Discourses from the Past, Challenges for the
Present, Perspectives for the Future**

Guest lecture series 2023/24

Main Organisers: Thorsten Fögen, Department of Classics & Ancient History and Jonathan Wistow, Department of Sociology



Introduction

Everybody's life and health are affected by environmental factors. Housing conditions, workplace, architecture, design and landscape constitute important individual and interdependent elements in that regard. To this we must add environmental factors such as global warming, extreme weather events and pollution, which have repercussions for the ways in which we think about architecture and housing.

This guest lecture series will approach the relationship between health, environment and architecture from various different angles:



1. An emphasis on historical, philosophical and aesthetic perspectives will lead to an informed understanding of exemplary discourses that have taken place in the past and inspired current debates on the topic. The basis will be the detailed analysis of the rich tradition of architectural writing, starting from Graeco-Roman antiquity (with an emphasis on Vitruvius' *De architectura* and Frontinus' *De aquaeductu urbis Romae*), but also covering later periods such as the Renaissance (e.g. Leon Battista Alberti's *De re aedificatoria*). Equally important is the corpus of medical texts, as represented by the *Corpus Hippocraticum* and later treatises, which devote a great deal of attention to the impact of the environment and housing on the health and wellbeing of patients. Aesthetic and creative aspects, explored by disciplines such as art and design, also play a vital role in shaping quality of life. Furthermore, philosophical discourse from different traditions sheds light on concepts of space, in particular the often fluid boundaries between the public and private, and their relationship with architectural, environmental and health-related issues.

2. A focus on socio-political and medical perspectives will incorporate disciplines such as modern sociology, public health, political science and medicine to complement the perspectives outlined above and approach the nexus between health, environment and architecture – at local, national and international levels. In a globalised world, decisions taken at different scales have repercussions for larger groups of people and for wider geographical areas. Recent phenomena such as pandemics, the scarcity of material resources and energy crises have had an influence on how ideas on architecture, housing and landscaping are now conceptualised.

3. The project will also embed and iterate its more theoretical approaches within practical and technical perspectives, in particular when it comes to aspects of participation in society; this includes how architecture facilitates social interactions between individuals and groups. We are interested in developing the co-production of knowledge about how local planners, policymakers, politicians, entrepreneurs and other decision-makers come together in governance systems to take responsibility for the integration of theoretical, scientifically underpinned considerations into practice and how they do this on different levels. One area that is of particular relevance in this regard is the aspect of disability and accessibility.

The combination of these approaches provides a ground-breaking and innovative venture. The Wolfson Research Institute for Health and Wellbeing at Durham (<https://www.durham.ac.uk/research/institutes-and-centres/wolfson/>) will provide a framework for the interdisciplinary dialogue that is envisaged.



Programme

Wednesday 11 October 2023 (12–13 h)

[Dr. Emily Webster](#) (Durham University, UK)

“Building out the rat: Urban improvement and ecologies of the Bombay plague epidemic, 1896–1920”

Wednesday 25 October 2023 (12–13 h)

[Dr. Christina Malathouni](#) (University of Liverpool, UK)

“Architecture for mental healthcare: Twentieth-century transitions”

Wednesday 8 November 2023 (12–13 h, online)

[Professor Christian Illies](#) (University of Bamberg, Germany)

“Buildings as an inner balm? Aesthetics and resilience”

Wednesday 22 November 2023 (12–13 h)

[Professor Colin McFarlane](#) (Durham University, UK)

“Sanitation for all? Cities and the right to citylife”

Wednesday 17 January 2024 (12–13 h, online)

[Professor Gemma Koppen](#) (Coburg University of Applied Sciences and Arts, Germany)

“The Healing Seven: How architecture impacts health”

Wednesday 31 January 2024 (12–13 h, online)

[Dr. Eleanor Ratcliffe](#) (University of Surrey, UK)

“More than ‘just nature’: Investigating the built environment as a place for psychological restoration”

Wednesday 14 February 2024 (12–13 h)

[Professor Matthew Eddy](#) (Durham University, UK)

“Architect of information: Race and the environmental health models of Dr James Africanus Beale Horton in British Africa during the nineteenth century”

Wednesday 28 February 2024 (12–13 h, online)

[Dr. Sara Honarmand Ebrahimi](#) (University of Frankfurt, Germany)

“The results freed us from some of our Western assumptions about how a hospital ought to be:

Aga Khan University Hospital in Karachi and hospital architecture in the mid-twentieth century”



Abstracts

“Building out the rat: Urban improvement and ecologies of the Bombay plague epidemic, 1896–1920”

Dr. Emily Webster (Durham University, UK)

At the turn of the twentieth century, the city of Bombay was in the midst of an ongoing epidemic of *Yersinia pestis* that killed thousands annually. While in many cities that *Yersinia pestis* arose during the Third Plague Pandemic (1896–1940) the epidemic emerged and subsided quickly, taking a few dozen lives, in Bombay, the epidemic returned cyclically, killing hundreds or thousands before retreating again. By 1930, over 180,000 residents of the city (or roughly one quarter of the city’s pre-epidemic population) were reported to have died of plague (Arnold 1993, Klein 1986). The unique ecology of the disease in the city prompted steps by the City Government of Bombay to address the apparent “place-based” etiology of plague. The Bombay Improvement Trust Act of 1898 established the Bombay Improvement Trust, a municipal organisation charged with enacting “a comprehensive scheme for the improvement of the City of Bombay, more especially in respect to the better ventilation of densely inhabited parts, the removal of insanitary dwellings, and the prevention of overcrowding” (Bombay Improvement Trust, Administration Report for the Year Ending, 31 March 1901, Bombay Improvement Trust Administration Report 1898–1899 to 1904–1905, p. 3).

In this talk, I will examine the role of slum clearance and urban beautification projects undertaken by the Bombay Improvement Trust between 1898 and its dissolution in 1925 in the spread of plague across the city of Bombay. Building on the work of Kidambi (2001), Hazareesingh (2001), and other scholars of urban improvement, I will argue that these urban beautification projects were conducted in tension with and often contradictory to the work being undertaken by the Plague Research Committee into plague-proof housing. Combining geospatial, ecological and primary source evidence from the epidemic, this talk will assert that the approach of the Bombay Improvement Trust likely contributed to the continuation of the epidemic by disrupting rodent communities and worsening living conditions, and in doing so highlight the long-term effects of the fracturing of knowledge production and implementation practices at differing scales of governance during the epidemic.

References:

- Arnold, David (1993): *Colonizing the Body. State Medicine and Epidemic Disease in Colonial India*, Berkeley.
- Hazareesingh, Sandip (2001): Colonial modernism and the flawed paradigms of urban renewal. Uneven development in Bombay, 1900–25. In: *Urban History* 28, 235–255.
- Kidambi, Prashant (2001): Housing the poor in a colonial city. The Bombay Improvement Trust, 1898–1918. In: *Studies in History* 17, 57–79.
- Klein, Ira (1986): Urban development and death. Bombay City, 1870–1914. In: *Modern Asian Studies* 20, 725–754.

“Architecture for mental healthcare: Twentieth-century transitions”

Dr. Christina Malathouni (University of Liverpool, UK)

Although mental health features prominently in contemporary discourse about human health and wellbeing, there are still critical gaps in historical accounts of twentieth-century psychiatry, related disciplines that led to the adoption of the broader concept of “mental healthcare”, as well as the spaces and places that supported these. Within this context, this research examines the design of specialist buildings for mental healthcare in England in the post-World War II period, including the critical transition to de-institutionalisation, as well as connections to earlier and later periods of the twentieth century.

Despite its virtual absence from associated historiography, building activity relating to mental healthcare in England was extensive throughout the twentieth century and also varied considerably: from interior reconfigurations of existing structures, to additions of nondescript buildings and wartime temporary structures, as well as new building types and flagship commissions that attracted higher funding and prestigious architectural designers. Out of this wide range, the discussion in this presentation focuses on a new building type that emerged as a variation of earlier asylum typologies at the turn of the century, yet continued to develop to its late decades; that is, what became known at different times as Reception, Admission, or Early Treatment Hospitals and effectively became a connecting thread across a series of critical policy and practice changes. Some comparisons will also be made to the earliest known applications of the preferred approach from the 1960s onwards, following the gradual abandonment of mental hospitals; namely, the incorporation of psychiatric wards within district general hospitals. Although the research falls primarily within the field of architectural history, one of its primary aims is to decipher connections to “social” interpretations of human nature and how parallel studies grounded in other disciplines that linked space and society may have also infiltrated specialist guidance for healthcare architecture.

References:

- Malathouni, Christina (2023): ‘The general atmosphere of this admission unit is reassuring and optimistic’. *Modernism, architectural research and evolving psychiatric reforms in post-war England*. In: Gundula Gahlen, Volker Hess, Marianna Scarfone & Henriette Voelker (eds.), *Doing Psychiatry in Postwar Europe. Practices, Routines and Experiences*, Manchester (in press).
- Malathouni, Christina (2023): ‘In line with the modern conception of much mental illness’. *Architectural design contributions to psychiatric reforms in post-war Britain*. In: Tara Hipwood & Seyeon Lee (eds.), *Historical Narratives of Public Health in the Built Environment (Special issue of Architecture_MPS 24.1, <https://doi.org/10.14324/111.444.amps.2023v24i1.001>)*.
- Malathouni, Christina (2020): *Beyond the asylum and before the ‘care in the community’ model. Exploring an overlooked early NHS mental health facility*. In: *History of Psychiatry* 31, 455–469.

“Buildings as an inner balm? Aesthetics and resilience”

Professor Christian Illies (University of Bamberg, Germany)

Buildings shelter from rain, wind, heat and cold, provide sufficient space, and meet other requirements to serve their purpose. Whether a building achieves this can often be quantified and measured, and thus determined objectively.

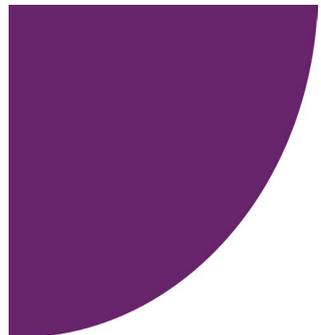
But what about its beauty and charm? Firstly, it is commonly argued that beauty, like other aesthetic characteristics, is simply a matter of subjective preference. Accordingly, a demand for architectural ‘beauty’ is to be avoided because it eludes objective comprehension. Secondly, aesthetic qualities are often dismissed as non-functional and viewed as a costly indulgence. (Possibly shopping malls, restaurants, hotels or amusement parks are exceptions for which creating a specific aesthetic ambiance appears functional in attracting customers.)

This paper challenges these notions: Firstly, architectural beauty and charm do not merely lie in the eyes of the beholder. While they do exhibit cultural and individual variations, there is substantial empirical evidence of a shared convergence in responses to specific aesthetic stimuli (see Heinrich 2019). This entails a comprehensive evaluation and tangible reactions to these qualities: Certain architectural forms or qualities are beneficial to people, they are willingly sought after. Conversely, other forms might irritate and tend to be avoided. The stress level can serve as indicators of this influence. Thus there are indeed intersubjective standards of aesthetic qualities, and positive qualities cultivate inner stress resistance and stability (as Plato already observed). Therefore, secondly, positive aesthetic experiences are a fundamental component of long-term health and not an indulgence. When architecture is supposed to serve humans and their intricate needs, then its aesthetic qualities become profoundly functional.

An architecture dedicated to the well-being and resilience of people must free itself from the notion that it is solely a subjective matter. On the contrary, architectural beauty can act as an inner balm, nurturing the soul.

References:

- Heinrich, Michael (2019): Metadisziplinäre Ästhetik. Eine Designtheorie visueller Deutung und Zeitwahrnehmung, Bielefeld.



“Sanitation for all? Cities and the right to citylife”

Professor Colin McFarlane (Durham University, UK)

In the wake of the COVID-19 pandemic, the relationship between the health of the city and good sanitation has never been more important. Sanitation is one of modern urban life's most neglected issues. This lecture makes the case for sanitation for all, arguing for a renewed, equitable investment in sanitation as a foundation of urban social life. Adopting Henri Lefebvre's concept of 'the right to the city', it uses the notion of 'citylife' to reframe the discourse on sanitation from a narrowly defined policy discussion to a question of the democratic right to public life.

References:

- McFarlane, Colin (2023): *Waste and the City. The Crisis of Sanitation and the Right to Citylife*, London.
- Beard, Victoria A., David Satterthwaite, Diana Mitlin & Jillian Du (2022): *Out of sight, out of mind. Under-standing the sanitation crisis in global South cities*. In: *Journal of Environmental Management* 306 (<https://www.sciencedirect.com/science/article/pii/S0301479721023471>).



“The Healing Seven: How architecture impacts health”

Professor Gemma Koppen (Coburg University of Applied Sciences and Arts, Germany)

“What if tomorrow the space we thought was safest – our own body – no longer offered protection? Are there protective shells that we could slip into? Hospitals that help heal our body and soul? Anyone embarking on a quest for answers will discover that there is an urgent need for thorough change in the planning and design of hospitals and healthcare facilities. Taking an understanding of severely ill people’s perceptions as a reference point (a scientific human scale) for this change, and thus arriving at a new architecture, is the scientifically defensible and auspicious way to fulfil the aspiration to design ‘healing buildings’” (Vollmer 2023: 14–15). Taking this perspective for the last fifteen years of empirical research and architectural design, my research group and I could identify seven factors of hospital architecture, seven so-called environmental variables, that influence the stress experience of seriously and chronically ill patients. Stressed patients recover with more difficulty and may find their recovery actually endangered. Reducing or avoiding stress is therefore the fundamental aim of an architecture that impacts health and healing. The lecture provides insight into the scientific discovery of the “Healing Seven” and its application to architecture.

References:

- Koppen, Gemma & Tanja C. Vollmer (2022): Architektur als zweiter Körper. Eine Entwurfslehre für den evidenzbasierten Gesundheitsbau, Berlin.
- Koppen, Gemma & Tanja C. Vollmer (2023): The healing seven. Key variables of an evidence-based hospital architecture. In: Tanja C. Vollmer, Andres Lepik & Lisa Luksch (eds.), Building to Heal. New Architecture for Hospitals, Berlin, 120–131.
- Ulrich, Roger S. (1984): View through a window may influence recovery from surgery. In: Science 224 / 4647, 420–421.
- Ulrich, Roger S. & al. (2004): The role of the physical environment in the hospital of the 21st century. A once-in-a-lifetime opportunity (Report to the Center for Health Design for the Designing the 21st Century Hospital Project), Concord, California (https://www.healthdesign.org/system/files/Ulrich_Role%20of%20Physical_2004.pdf).
- Vollmer, Tanja C. (2023): La Infirmity. The scientific human scale of a new hospital architecture and its necessity. In: Tanja C. Vollmer, Andres Lepik & Lisa Luksch (eds.), Building to Heal. New Architecture for Hospitals, Berlin, 14–19.



“More than ‘just nature’: Investigating the built environment as a place for psychological restoration”

Dr. Eleanor Ratcliffe (University of Surrey, UK)

Extensive literature in environmental psychology is devoted to study of the connections between physical environment and health and wellbeing, including psychological outcomes. A subsection of this literature focuses on ‘restorative environments’, or settings that support psychological recovery from everyday stress and/or demands on attention. Much of this work stems from study of wilderness experiences in the 1980s (e.g. Kaplan & Talbot 1983), and since then the field has broadly positioned natural environments as more helpful in supporting psychological restoration than urban or built environments (see Hartig & al. 2014, for a review). Practitioners now draw on this literature to inform nature-based interventions for mental health, including in urban settings (Leavell & al. 2019). In recent years scholars have challenged the ‘natural versus urban’ dichotomy, showing that built settings can also support psychological restoration through experience of, e.g., cultural heritage, streetscapes and leisure areas, and particular architectural elements (Weber & Trojan 2018). Examination of positive experiences of built environments has also revealed the importance of attachment to place, showing that favourite places and areas that reflect one’s individual or cultural heritage can be perceived and experienced as restorative (Ratcliffe & Korpela 2016, Subiza-Pérez & al. 2021). In this talk I will present these and related studies, which I have conducted together with international collaborators, and suggest ways in which the findings can be applied to support psychological wellbeing in cities and towns.

References:

- Hartig, Terry, Richard Mitchell, Sjerp de Vries & Howard Frumkin (2014): Nature and health. In: *Annual Review of Public Health* 35, 207–228.
- Kaplan, Stephen & Janet Frey Talbot (1983): Psychological benefits of a wilderness experience. In: Irwin Altman & Joachim F. Wohlwill (eds.), *Behavior and the Natural Environment*, New York, 163–203.
- Leavell, M. Ashby, Jenn A. Leiferman, Mireia Gascon, Fleur Braddick, J. C. Gonzalez & Jill S. Litt (2019): Nature-based social prescribing in urban settings to improve social connectedness and mental well-being. A review. In: *Current Environmental Health Reports* 6, 297–308.
- Ratcliffe, Eleanor & Kalevi M. Korpela (2016): Memory and place attachment as predictors of imagined restorative perceptions of favourite places. In: *Journal of Environmental Psychology* 48, 120–130.
- Subiza-Pérez, Mikel, Tytti Pasanen, Eleanor Ratcliffe, Kate Lee, Anna Bornioli, Jessica de Bloom & Kalevi M. Korpela (2021): Exploring psychological restoration in favorite indoor and outdoor urban places using a top-down perspective. In: *Journal of Environmental Psychology* 78, 101706 (<https://www.sciencedirect.com/science/article/abs/pii/S0272494421001596>).
- Weber, Anke Maria & Jörg Trojan (2018): The restorative value of the urban environment. A systematic review of the existing literature. In: *Environmental Health Insights* 12, 297–308.

“Architect of information: Race and the environmental health models of Dr James Africanus Beale Horton in British Africa during the nineteenth century”

Professor Matthew Eddy (Durham University, UK)

Information is often characterised as facts that float effortlessly across time and space. But during the nineteenth century, information was seen as a process that included a set of skills enacted through media on a daily basis. Media systems, like buildings and roads, had to be designed and, like architects, information engineers had to think about a host of material and social issues when they created data. This was especially the case in colonial settings such as British West Africa, where the structural inequalities of race influenced the design of health models and the collection of inadequate medical and climatological data. But there were a number of nineteenth-century black physicians who challenged this architecture. One such physician was Dr James Africanus Beale Horton (1835–1883), and this paper examines the role he played as an informatic architect who sought to re-engineer the relationship between data and disease in the media systems the British used to manage health in mid-nineteenth-century colonial Sierra Leone.



“The results freed us from some of our Western assumptions about how a hospital ought to be: Aga Khan University Hospital in Karachi and hospital architecture in the mid-twentieth century”

Dr. Sara Honarmand Ebrahimi (University of Frankfurt, Germany)

In 1970, after interviewing several architects based in Britain, France and the USA, His Highness the Aga Khan IV chose Boston-based Thomas Payette as the architect and Mozhan Khadem, an Iranian architect, as the design consultant to design the Aga Khan Medical Complex in Karachi, Pakistan. Payette and Khadem designed the Complex in 1972/73 together with a group of health consultants, a landscape designer, a local design consultant and several tilemakers. The construction of the Complex, which consisted of a 721-bed hospital, a medical school for 500 students, a school of nursing, housing for staff and students and a mosque, was completed in 1985. Prior to designing the Complex, Payette and Khadem visited Spain, North Africa, Turkey, Persia and Pakistan to study historic hospitals and buildings. Payette called this trip a “process of discovery”, stating that “the results freed us from some of our Western assumptions about what a hospital ought to be”. This paper will contemplate this statement by examining the architecture of the Aga Khan Medical Complex in Karachi in the context of hospital architecture in the middle decades of the twentieth century. It shows how the design team’s purpose was to put forward a different vision distinct from both the capitalist West and the Socialist East. This vision focused on “all-encompassing unity” of “spirit and body” and “man and nature” by drawing on prevailing ideas concerning Islamic architecture that, for example, were being discussed in Persia by the likes of Mohammad Karim Pirnia.

References:

- Erofeev, Nikolay & Łukasz Stanek (2021): Integrate, adapt, collaborate. Comecon architecture in Socialist Mongolia. In: ABE Journal 19 (<https://journals.openedition.org/abe/12604>).
- Fenk, Anne-Katrin, Rachel Lee & Monika Motylińska (2020): Unlikely collaborations? Planning experts from both sides of the Iron Curtain and the making of Abuja. In: *Comparativ* 20, 38–59.
- Honarmand Ebrahimi, Sara (2023): The lived experience of hospital design. A case study on internationalism. In: *HEX Digital Handbook of the History of Experience* (<https://sites.tuni.fi/hexhandbook/cases-and-sources/the-lived-experience-of-hospital-design-a-case-study-on-inter-nationalism/>).
- Levin, Ayala (2022): *Architecture and Development. Israeli Construction in Sub-Saharan Africa and the Settler Colonial Imagination, 1958–1973*, Durham, NC & London.
- Vargha, Dora (2023): Missing pieces. Integrating the socialist world in global health history. In: *History Compass* 21.7, e12779 (<https://compass.onlinelibrary.wiley.com/doi/epdf/10.1111/hic3.12779>).
- Wills, Julie, Philip Goad & Cameron Logan (2019): *Architecture and the Modern Hospital. ‘Nosokomeion’ to ‘Hygeia’*, London & New York.



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