

CALL FOR PAPERS

Special Section on Health, Urban Climate and Complexity in Urban Design and Planning

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Abstract

This journal section welcomes contributions addressing new knowledge through research, practice examples and experimentation related to public spaces for all. The section calls for contributions to a discourse within and across the nexus of:

- Urban health to enable holistic and equitable communities
- Urban climate analysis and environmental performance concerning, for example, city form, green infrastructure and human thermal comfort
- Exploring urban complexities, particularly regarding the consideration of the system-wide interdependencies of sociotechnical and socioecological relationships.

To date, there is very little discourse and research on public space undertaken from these perspectives and paradigms and their intersection. Hence, we seek contributions that embrace complexity, examine ambiguities and in-betweens, and contradictions in policies. We also welcome experimental methodologies that can have a practical impact and achieve an ontological shift towards transformative change in communities transcending the conceptual Global North and South, East and West dualism. We appreciate theoretical and practical investigations that demonstrate entanglement with multifaceted aspects ranging from visualisation, communication, or arts-based expressions. We seek to explore the environmental, social, and technical conditions that contribute to an urban climate conducive to health and well-being in the broadest sense. Selected contributions and case studies will need to demonstrate the successful application of at least two of the three focus themes. These manuscripts will allow space for discussion regarding scale-ability and practice application to achieve equitable public spaces.

Keywords: urban climate, urban complexity, public space, bioclimatic sustainability, integration of practice and theory, sociotechnical systems, equitable cities, urban health

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Scope

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Rationale

The 12th of January 2023 marks the date when the World Meteorological Organisation declared that the past eight years have been the confirmed warmest on record. The ever-increasing greenhouse gas concentration continues to accumulate heat dynamically, differentiated and with increased volatility. While the aspirational global cities blueprint, the New Urban Agenda outlines the collective direction by which we should design environments for human habitation, we continue largely on a path dependence of business as usual. Concerns arise across multiple dimensions, including rapid urbanisation, without comprehensive, evidence-informed approaches to climate-responsive urban design and planning.

This section-focused call for papers provides a provocation to engage scholars in an open-ended discourse and practical knowledge building. We approach public space from rich perspectives of holistic community health and well-being, climate-responsiveness, and regenerative systems thinking. We focus on these through research, practice experiences and experimentation related to public spaces for all. Together, the three focus areas can assist in gaining a deeper understanding of how professions relevant to public space can increase their level of 'response-ability' to prepare urban systems in which we can sustain health so that no one is left behind.

Urban health

Urban health and well-being are integral to the Sustainable Development Goal (SDG) 3, but also closely linked to SDG 11 (Sustainable communities and cities), specifically targeting SDG 11.7—Access to public space for all as well as the Sustainable Development Goal 13 aimed at limiting and adapting to climate change. Furthermore, aligned with the New Urban Agenda's call for evidence-informed approaches, particularly in co-design for just cities (Scharoun and Mews 2018, Ottosen and Mews 2019), we embarked on a mission to explore transformative actions within both process and outcomes (Tavares et.al. 2022) within an emerging research area to overcome some of the objectified nihilism (Fry 2012) that has been globalised under the mantra of productivity, the necessity of continual economic growth to achieve sustainable development. Before journeying into urban health, we wish to stress Fry's observation that there is, in a sense, multiple systems failure at play in which we (humans) and the natural resources we so depend on are finite and currently being misdirected under various names: development, the market, economics, progress (Fry 2012).

Urban health can be understood as a branch of public health research focusing on the health and well-being of individuals and communities living in urban environments or cities. It encompasses multiple perspectives, including promoting and protecting health within the context of the built environment. At the same time, urban health considers the unique challenges, complexities, and opportunities presented by urbanisation that are embedded in different socio-political and geographical contexts and proximities. Key components of urban health in the context of public space include (Michalos 2014):

1. **Environmental Factors:** Examining the impact of the urban environment, including air and water quality, extreme weather events, noise levels, green spaces, and exposure to pollutants and affective atmospheres for the health of urban residents.
2. **Social Determinants:** Public health considers, in particular, how social factors such as socioeconomic status, access to healthcare, education, employment opportunities, and social networks influence health outcomes in urban populations.
3. **Infrastructure and Planning:** Assessing the role of planning and designing public spaces related to key infrastructure, such as transport or social infrastructure provisions, in shaping health-related behaviours in processes and outcomes.
4. **Disease Patterns:** Analysing the prevalence and distribution of communicable and non-communicable diseases within urban populations, considering factors like population density, land use, migration, culture and spreading infectious diseases as we experienced with the COVID-19 pandemic in recent history.
5. **Access to Healthcare:** Evaluating the availability and accessibility of therapeutic places and other health-promoting resources and understanding how these factors impact health outcomes.
6. **Behavioural and Lifestyle Factors:** Investigating how urban living influences lifestyle choices, such as physical activity, play, diet, and substance use, and how these factors contribute to health or disease.
7. **Health beyond the human (ecological systems change):** To further advance our collective understanding to improve health outcomes and to realise an underlying connectedness as an integral aspect of the urban condition, there is a need to examine approaches **beyond the human within the Anthropocene**

(Zywert 2017). In an era where human existence is now closely intertwined with circular feedback between ecological processes and even technology, we need to challenge traditional human superiority thinking and urge a reconsideration of technology's meaning and materiality (Morton 2016, 2017). Drawing insights from decolonised approaches and indigeneity (Yunkaporta 2019), this journal section is an opportunity to reshape our Western understanding of materiality and technology in the area of urban health and public space.

Subsequently, for the purpose of this section, urban health is an evolving field that requires interdisciplinary collaboration and venturing into emerging imaginary world-making practices. The goal is to create healthier and more equitable urban environments by addressing the context-specific and dynamic health challenges associated with urban living. Promoting evidence-informed policies (Corti et al. 2022) and practices that enhance the well-being of all residents, including creative, spatial, and more than human practices, will need to become part of the worlding process within the urban health discourse.

Urban design methods dealing with urban climate and bioclimatic design

Bioclimatic design means being passively responsive to the local climate to improve human comfort conditions without using active engineering systems (Olgyay 2015). Bioclimatic design principles include using urban climate variables to improve human comfort, such as wind orientation for channelling breezes, material selection to reduce heat traps, and shading both by trees and built structures. Bioclimatic design is widely understood and applied in the field of architecture but rarely translated into urban design and planning (Manzano-Agugliaro Montoya Sabio-Ortega and García-Cruz 2015). Over the past two decades, studies have shown that climate knowledge has had a low impact on the urban design and planning processes despite the abundance of scientific studies in urban climatology and microclimate design (Lenzholzer and Brown 2013, Hebbert and Mackillop 2013, Eliasson 2000). In this context, Urban Design and Town Planning are well positioned to make a meaningful contribution in preventing undesirable effects through climate-appropriate responses, as it is known that the orientation of buildings and streets, composition and colour of surface materials, and types and location of vegetation, for example, have major effects on the urban climate. These interventions can improve outdoor climate and facilitate the use of public spaces while contributing to a better and more efficient indoor climate through the reduction of heating and cooling requirements, consequently reducing greenhouse gas emissions. In the context of urban heat adaptation research, there is an urgent need to enable well-informed and targeted preventive spatial practices that will limit future heat stress and mitigate human health impacts. Such climate-responsive strategies can be implemented at various scales, from street design to regional planning. Hence, professionals must be prepared to include these considerations in their practice. In this section, we seek work focused on various urban climate-related methods – including, for instance, interpretive research, research through design, physical prototypes, computer modelling and so forth – that aim at better understanding the complexity of urban climate and bioclimatic design towards healthier urban environments.

Urban Complexity and Systems Methodologies

A clear and comprehensive view of the range of system interactions which contribute to the establishment of equitable, efficient, and enduring public spaces and cities is a complex task (Stevens et al. 2021). It is necessary to consider, assess and evidence the range of significant issues and interdependencies at various scales, from the site to the local to the regional. Matters relating to community, climate, health, and the range of technical, ecological, and societal leverage points are essential from the micro to the macro scale, as they cut across formal and informal regulatory and spatial systems. Further, exploring and comprehensively understanding the potential of future urban development and the role and importance of public space involves an increasing range of active stakeholders from the community, and the public and private sectors. It requires collaborative and multidisciplinary approaches, often at different times and often at the same time. When such urban complexity is challenging, systems methodologies must be used as the approach (Stevens 2016).

Systems methodologies seek to jointly optimise the significant and complex interfaces between social and human systems, technical and infrastructure systems, and ecological and natural systems. It is recognised that their application and use can offer land use planning and urban design approaches and systems descriptions which exhibit the properties of adaptive capacity (Read et al. 2016). When dealing with multifaceted complexity and in times of uncertainty, identifying, understanding, and optimising these properties – emergence, hierarchal relationships, dynamism, and variable performance – is essential (Stevens et al. 2018). Fortifying adaptive capacity into urban systems – like the public space – underpins the concept of resilience. There is a lot of promotion and discussion about resilience and resilient systems, but less understanding and even fewer approaches that can assist in establishing it in the design of our urban settings and public space (Stevens et al. 2021).

It is anticipated that submissions in this section seek to make empirical contributions that apply systems thinking and methodologies to establish holistic views of the opportunities and constraints for the future of public space. Such ‘whole of system’ perspectives can provide shared understandings of these opportunities and move beyond the disciplines silos which have constrained progress towards equitable, efficient, and enduring public spaces and cities. We seek insights that prioritise communities [of all kinds] as assets in the system, promote quality of life, show meaningful respect for individual differences, and give enduring responsibility to all stakeholders.

An invitation to contribute

Having outlined the particularities of the research nexus, we hope that our impulse can help you gain clarity and be willing to journey with us into an exciting area of research. We look forward to your rich and insightful contributions.

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