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EDITORIAL

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Walkability: From Spatial Analytics to Urban Coding and Actual Walking

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Abstract

Walkability has become a key focus of urban research, linked to the aims of reversing car-dependence and re-enabling walking as a healthy, environmentally sustainable and sociable mode of mobility. This thematic issue presents a collection of articles using cutting-edge research methods ranging from walk-along interviews to statistical analysis of historic photography, topological and morphological analysis of street networks, and analysis of the spatio-temporality of various aspects of streetlife. The articles included here provide new insights in understanding morphologies of walkability in cities across the globe. This concise selection of non-reductionist walkability research reveals the exceptional breadth of research tools, inspiring further methodological innovation, and supporting future urban design and planning practice.

Keywords

assemblages; public space; spatial analysis; spatial planning; streetlife; urban codes; urban mapping; urban mobility; walkability; walking

Walkability has emerged as a key focus of multi-disciplinary research, linked to the aims of reversing car-dependence and re-enabling walking as a healthy, environmentally sustainable and sociable mode of mobility. While often conflated with actual walking, etymologically walkability refers to the capacity for walking enabled by the built environment (Dovey & Pafka, 2020). It has been linked to the key neighbourhood-scale morphological properties of access, density, and mix, as well as micro-scalar elements of the street section, such as public/private interfaces, footpaths, and landscaping. Yet none of these attributes can be reduced to a simple measure, nor are these separable from the natural conditions of topography or climate. The multiplicity of interrelations between these various factors is what defines the overall urban design quality.

Research advancing understandings of walkability remains highly multi-disciplinary, spanning across the fields of urban design, planning, transport and public health. Accordingly, there have been many attempts to summarize the growing body of research, including by Forsyth (2015), Talen and Koschinsky (2013), and Shields et al. (2023). Empirical research captured in these is often focused on metrics of street network models (Marshall et al., 2018), to the detriment of non-measurable aspects (Ewing & Handy, 2009). In the process limitations of theoretical models and metrics are in some cases simply disavowed, while in others a multiplicity of methods is used to capture the non-quantifiable aspects of urban morphology (Biraghi & Pafka, 2025).

This thematic issue presents a collection of articles using cutting-edge research methods to explore morphologies of walkability, as a foundation for the design and planning of urban environments. Of 19 abstract proposals received, a compact selection of six outstanding articles has been included, providing a "taste" of the breadth of current directions of enquiry in the field. These include articles contributing to urban theory, research methods, and planning practice.

Emanuel and Hilliard's (2025) archival analysis of historic photography of Stockholm taken between 1880 and 1939, recording over 3,000 pedestrians, captures with precision the effects of increasing automobility on streetlife intensity. This is manifest in the increasing relegation of walking to the sidewalk pavements and the radical reduction of children's independent mobility. The authors provide well-grounded insights on aspects of streetlife that have been neglected in research to date, such as that about a quarter of pedestrians were engaged in static activities. Notable too are the quantified findings about the prevalence of social life on local streets as opposed to main streets that are more focused on channelling flows. This invites a more nuanced reading of the "social logic of space."

Vrebos et al. (2025) propose a participatory research process using walk-along interviews to capture sensory experiences of place and changing senses of belonging within "neighbourhoods-in-flux." Their approach is guided by new materialism, and an interest in processes of emergent capacities and processes of becoming (DeLanda, 2006; Deleuze & Guattari, 1987).

Salahieh and Zibar's (2025) exploration of walkability in post-conflict Aleppo provokes us to direct our attention to a distinct type of case study, in which "walking becomes a precarious tiptoeing" and tactic of survival, adapted against urbicidal practices. Hopefully this should encourage researchers to not shy away from engaging with such difficult topics in the future, in an era of academic output easily falling in the trappings of facile big-data supported numbers-crunching.

Gorzka et al. (2025) present a comparative study of coastal flood adaptation projects of urban waterfronts around the Baltic Sea. The nine projects from five countries show increases in connectivity and water access, demonstrating synergies between planning for climate adaptation and increased walkability outcomes. These cases point to the potentials of flexible and adaptable designs for blue-green infrastructures, that should raise expectations from similar projects around the globe.

Biraghi et al. (2025) develop a data-based framework combining statistical and spatial analysis for assessing and prioritizing pedestrianization projects. The approach is exemplified using a neighbourhood of Rio de Janeiro as case study. The systematic multi-method analysis of five parallel streets combines topological and

morphological analysis of street networks along with socio-spatial analysis of functional mix and aspects of streetlife. The authors argue that urban planning shall be always informed by such complex and extensive analysis of current conditions, increasingly enabled by various datasets.

Patil et al. (2025) analyse the contrasting sensory experiences of informal street vending in Nagpur with the highly regulated street markets of Brisbane. Identifying in each case positive and negative sensory experiences, the authors attract attention to the role of urban codes in mediating conflicts, and the role of planning in enabling streetlife without supressing its vitality. They argue for nuanced regulations that carefully consider the rhythms of street-trading in all its socio-spatio-temporal complexity.

As evident in all these articles, it is now well-established that walkability is linked to a complex set of attributes of built form. Nevertheless, numerous 'WalkScore'-like aggregated indexes have been proposed, sometimes branded particularly for commercial use in the property sector. Such tools often lack methodological transparency, yet risk influencing planning practice. Not less concerning is to see such indexes making in-ways into formal academic publishing. Such reductionist approaches may well have their appeal but are more likely to be obscuring the diversity of walkable environments. All the articles in this thematic issue go in the opposite direction by developing practical and effective methods or measures to assess qualitative urban aspects relevant for walking. As such, these may contribute to a repository of "Actionable Urban Measurements" (AUM), of easily computable, understandable, and adjustable urban form metrics relevant for assessing various properties related to walkability. The increasing availability of sophisticated open access tools and large datasets enables the creation of multi-faceted non-reductionist frameworks for the characterisation of urban structures and the assessment of their performances.

To foster the impact of research, it is critical to produce tools able to replace misguided planning routines in our cities. We hope that this concise selection of walkability research reveals the exceptional breadth of such tools, inspiring further methodological innovation, as well as support related research and practice. Ultimately the value of conceptual frameworks and research methods is best reflected in the impact these have on actual living conditions.

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Conflict of Interests

The authors declare no conflict of interests.

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