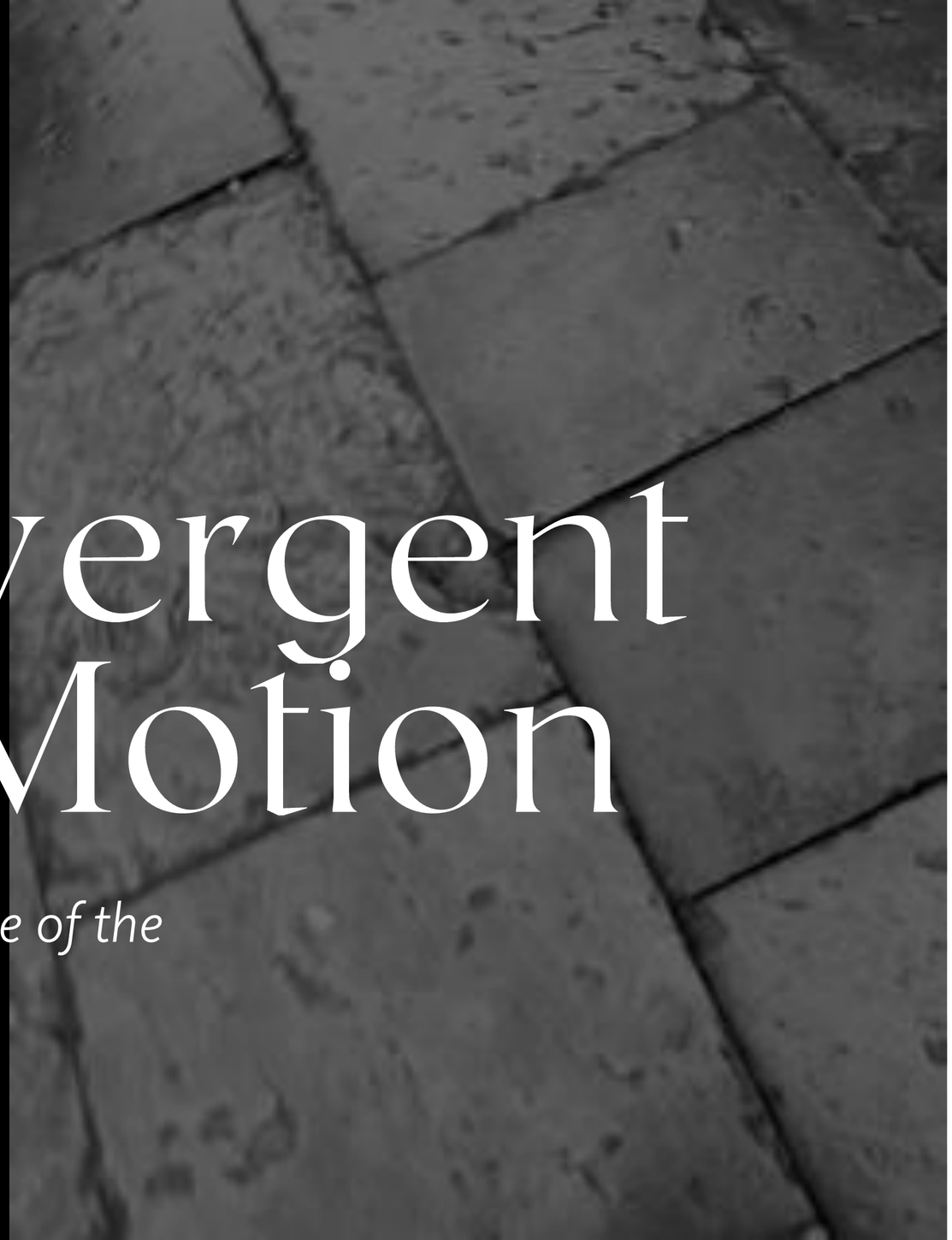
The Neurodivergent Body in Motion

Mapping the autistic sensory experience of the walkable urban space.



J E BENNETT-C VASILIKOU

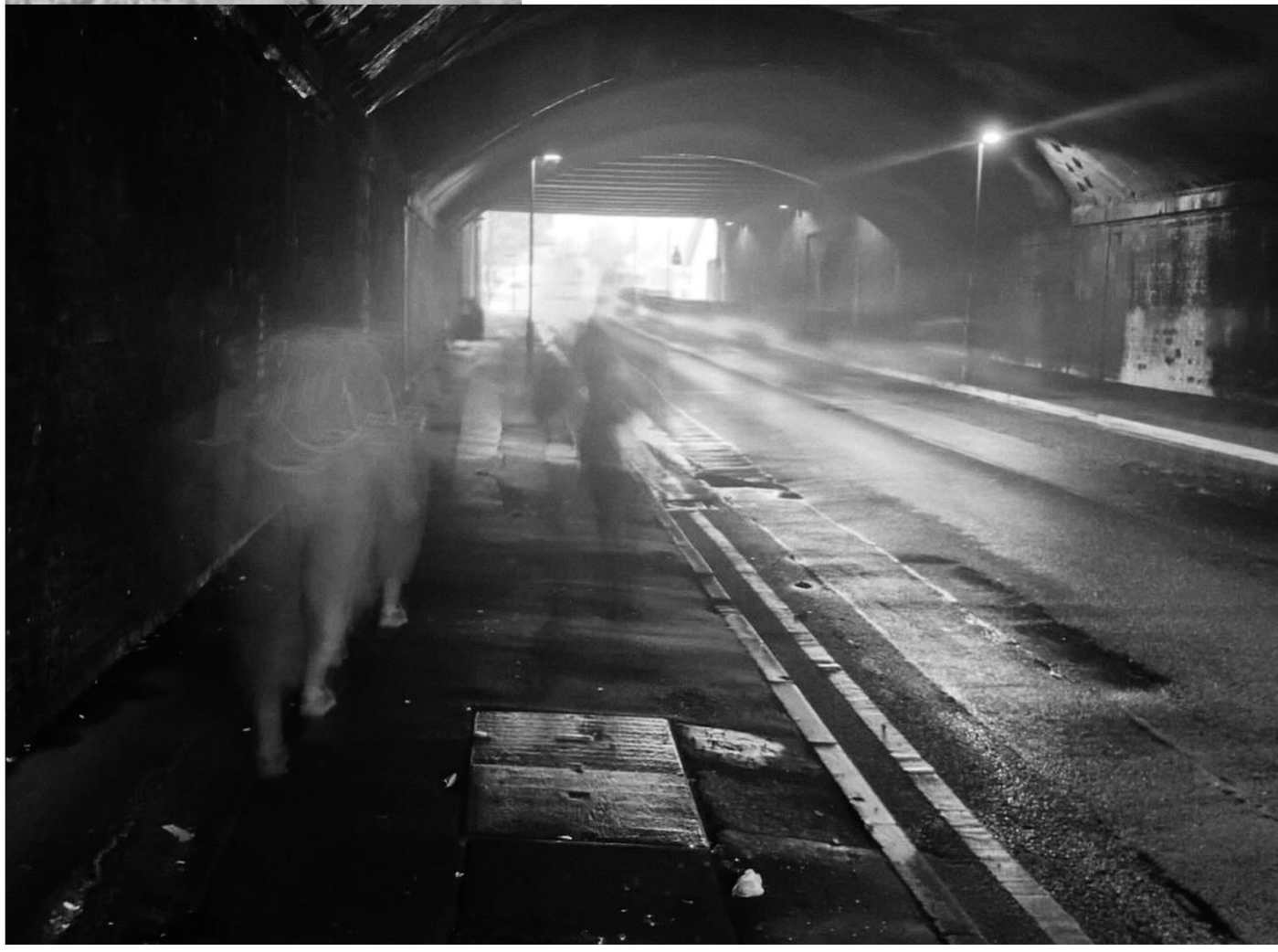
Overview

Ambiences Congress Lisbon 2024

This paper presents a scoping review focusing on **neurodivergent experiences of urban space while walking**. It aims to explore how current research may be failing to explore the human elements of neurodiversity and how urban spaces are perceived through alternative rhythms.

The neurodivergent body is often overlooked and under-researched (Autistica, 2024). While the design of indoor spaces for neurodivergence has recently gained more attention (PAS6463), the design of outdoor urban spaces for neurodivergence requires further research (Cosgrave, 2022).

Sensory differences are part of the diagnostic criteria for neurodiverse conditions. This review doesn't ask why the neurodivergent (ND) body sensory experience is different. **Rather, we focus on how the attunement of the ND body to sensory sensitivity can provide a deeper understanding to the impact of urban spaces on the experience of walking for all**.



Methodology

We have selected “neurodivergent” and “neurodiversity” as key search terms to capture the current body of knowledge. We aim to capture a wide lens of experiences without excluding or creating a hierarchy.

For example, autistic or ADHD, dyspraxia or dyslexic identities and diagnoses are encompassed. Neurodiversity is the umbrella term which encompasses a variety of neurodiverse identities, including autistic, ADHA, dyspraxic, etc. Neurodivergent (ND) is the person-centred use of the word.

‘Actions taken’ was specifically to engage with urban walking and the public urban. Not privatised spaces.

‘The context’ engaged explicitly with the public urban, not privatised space.

The Review Focus	The Action Taken	The Context
("neurodiverse" OR "neurodiversity")	("walking" OR "walk" OR "pedestrian")	("urban site" OR "urban place" OR "urban architecture" OR "urban space")
	("flâneur" OR "dérive")	("built environment" OR "built space" OR "outdoor space")
	("locomote" OR "locomoting")	("civic")
		("urban park" OR "urban green space" OR "city green space")
		("city" OR "town")
		("street" OR "pavement" OR "sidewalk" OR "footpath" OR "pedestrianised")
Capturing literature regarding the neurodiverse corpo-sensorial lens.		

Methodology

Research concentrates on neurodiverse adults' experiences of external built environments. Excludes internal architecture, domestic spaces, and children from the scope of the investigation.

Participant Definition: Adults are individuals 18 years or older or where research suggests adult participation.

Challenges in Literature: Age disaggregation is rarely specified. Research Methods often inadequate and do not capture an autonomous voice.

A matrix of search terms was used to generate:

- 18 keyword searches, then applied across seven databases: Web of Science, Scopus, Cochrane Library, JSTOR, PubMed, ScienceDirect, and Google Scholar.
- Temporal bounding 1990 – present.

The Review Focus	The Action Taken	The Context
("neurodiverse" OR "neurodiversity")	("walking" OR "walk" OR "pedestrian")	("urban site" OR "urban place" OR "urban architecture" OR "urban space")
	("flâneur" OR "dérive")	("built environment" OR "built space" OR "outdoor space")
	("locomote" OR "locomoting")	("civic")
		("urban park" OR "urban green space" OR "city green space")
		("city" OR "town")
		("street" OR "pavement" OR "sidewalk" OR "footpath" OR "pedestrianised")
Capturing literature regarding the neurodiverse corpo-sensorial lens.		

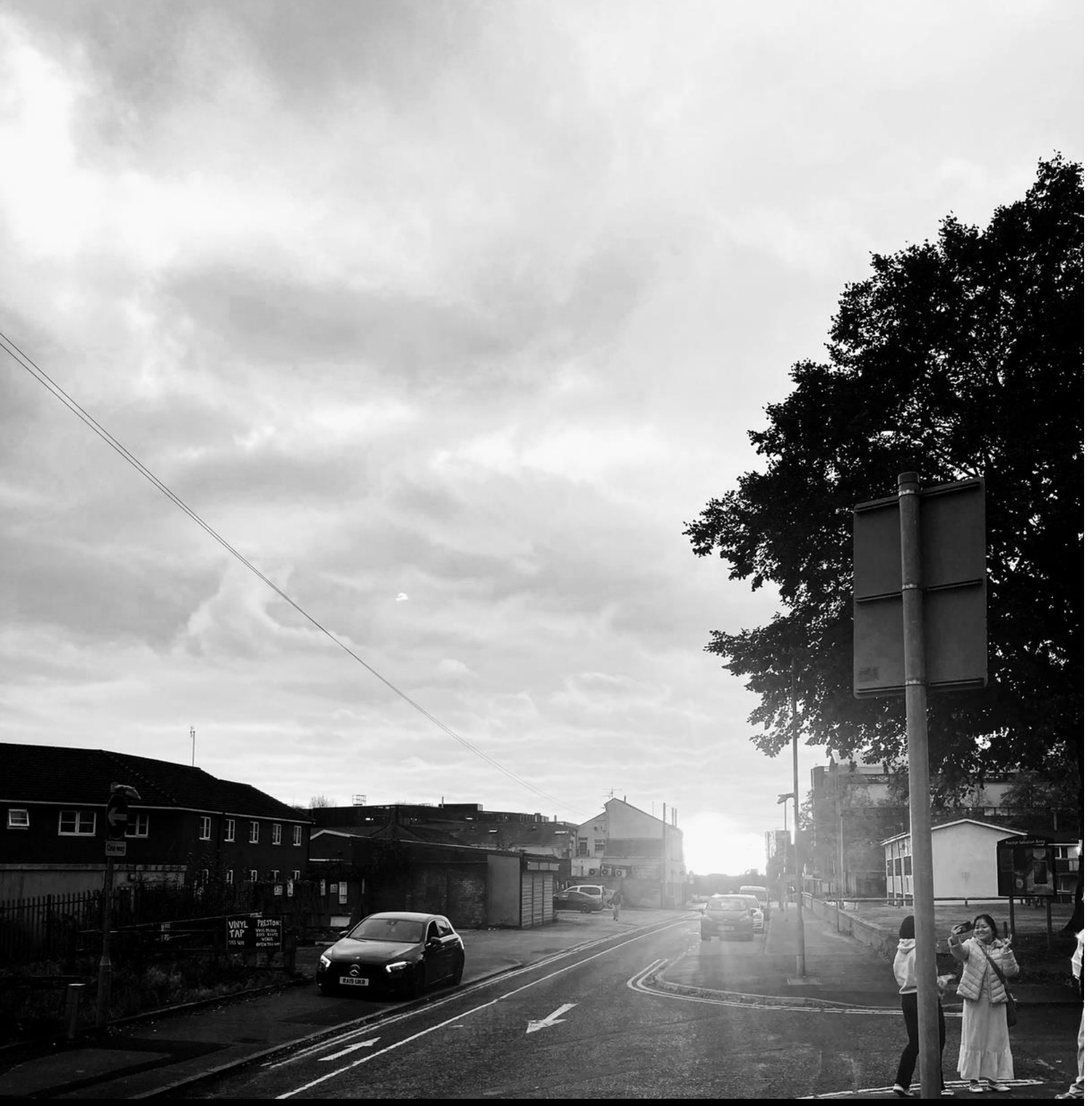
The Search

The initial search yielded 11,078 results

- Excluding studies related to children, 10,783
- Analysis of 295 abstracts
- Leaving 24 studies
- Seven were removed due to duplication
- Full-text analysis removed three studies.

- **14 studies remained.**

What are the implications of these numbers?



Corpo-sensorial Lens

A new analytical framework

Recognises individuals' lived experiences.

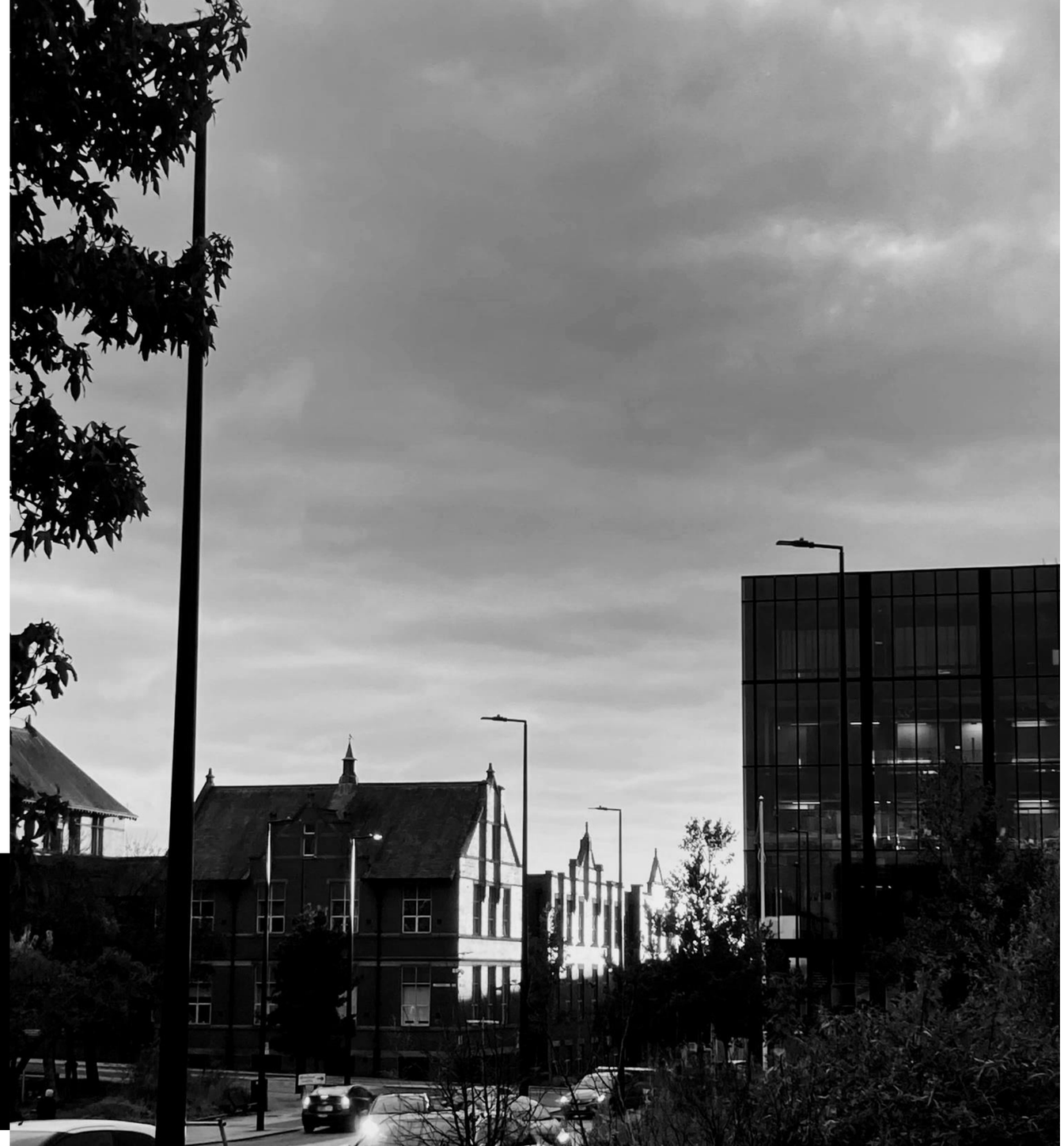
It acknowledges the physical, perceptual and existential barriers that impact access, and we recognise the burdens these barriers place on individuals.

The framework that supports the research of joy.

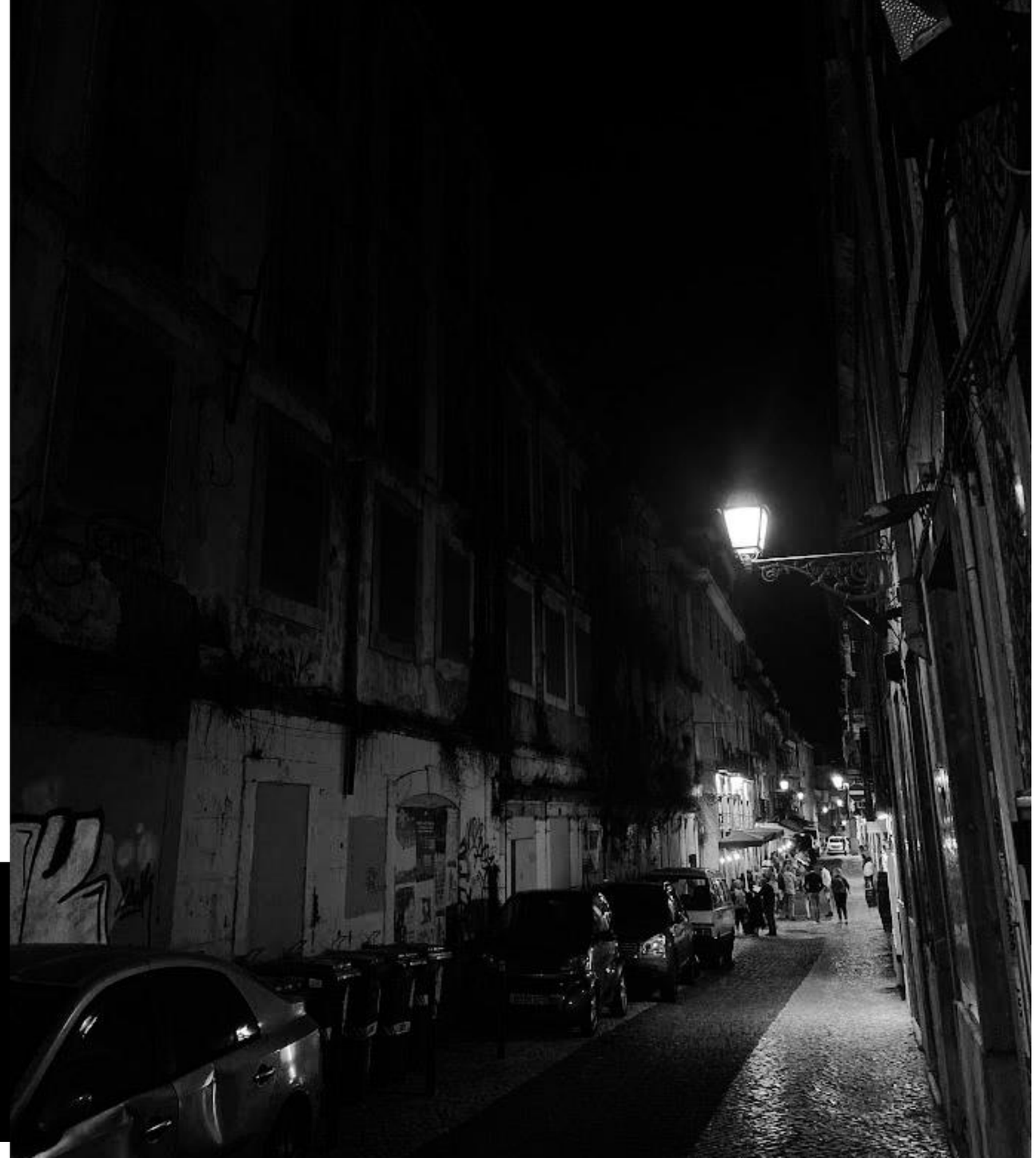
- Embodied
- Perceptual
- Existential

Highlighted Issues

ND users can experience public spaces with ‘discomfort’ and ‘surprise’ and inhabit space with ‘careful attentiveness’ due to factors such as ‘sensory overload’, ‘hidden logic of wayfinding’, and ‘anxiety-provoking transitions'.



Neurodivergent individuals engage with and transform urban spaces in complex ways, using diverse spatial and temporal practices to create more inclusive, accessible, and enabling environments that accommodate their embodied experiences and range of neurological differences.



A more comprehensive understanding of the diverse ways that neurodivergent individuals experience and inhabit urban spaces is needed to inform the planning and design of cities beyond just autism-friendly considerations.

Mostafa (2021), Metz (2024), and Hamraie (2024) emphasise the importance of physical and existential elements in designing neurodivergent-friendly spaces.

A call for creative methods and an epistemic shift within urban design.

Explore spatial sequencing and sensory aspects (e.g., sound) alongside existential elements like fear, inclusion, and belonging.

Incorporate first-person narratives to understand better ND individuals' intimate, embodied experiences within urban spaces.

Investigate how re-sequencing or navigating spaces differently can reduce negative impacts and improve both the production and perception of spaces.

References

One of our 2030 Goals: Accessible public spaces | Autistica. (2024). Autistica. https://www.autistica.org.uk/about-us/2030/by-2030-public-spaces-will-be-more-accessible-for-neurodivergent-people

Bennett, J, E. & Vasilikou, C. (2024). **The Neurodivergent Body In Motion: Mapping The Autistic Sensory Experience Of The Walkable Urban Space. Sensory Explorations, Ambiances In A Changing World: Proceedings Of The 5th International Congress On Ambiances**. International Ambiances Network. Lisbon, Portugal.

British Standards Institution. (2022). PAS 6463:2022. Design for the mind – Neurodiversity and the built environment – Guide. https://knowledge.bsigroup.com/products/design-for-the-mind-neurodiversity-and-the-built-environment-guide?version=standard

Cosgrave, E. (2022). Safety in Public Space: Women, Girls and Gender Diverse People, Good Growth By Design. London

SCAN ME