



Sensing Cities: Toward a Synesthetic Cartography of Urban Experience (2025)

PREPARED BY DR. MICHELLE BURK, PHD
HASTABYMICHELLE@GMAIL.COM



Introduction



This interdisciplinary study introduces Synesthetic Sensory Mapping, a research methodology that explores how subconscious sensory-symbolic associations shape people’s emotional orientation to cities.

Drawing from environmental psychology, literary theory, linguistics, mediated presence theory, spatial ethics, and affective geography, the project investigates how cities are not only designed or navigated but also felt, remembered, and trusted.

Research Considerations:

- What patterns emerge in Sensory Objective Correlative (SOC) Scores across neighborhoods and cities, and how do these patterns correlate with residents’ reported feelings of hospitality, fatigue, or overstimulation?
- How do Accessibility Scores, gathered through embodied scenario prompts, reveal systemic barriers to mobility, slowness, and rest in urban environments?
- What is the relationship between sensory-symbolic resonance (SOC Scores, key term weights) and prosocial behaviors such as willingness to donate, support, or identify with a neighborhood?
- How do demographic variables shape differential experiences of sensory and accessibility profiles within the same neighborhoods?
- Can symbolic-sensory interventions measurably shift SOC and Accessibility Scores in “harsh” or “hostile” neighborhoods, increasing empathy, ease, and generosity?

Objectives

As immersive media increasingly shape how we interpret space, the line between physical cities and their digital representations is dissolving (Burk, 2025). This project asks:

What if cities, whether physical, virtual, or symbolic, were designed not just for efficiency or aesthetics, but for **empathy, care, and ethical, accessible engagement?**

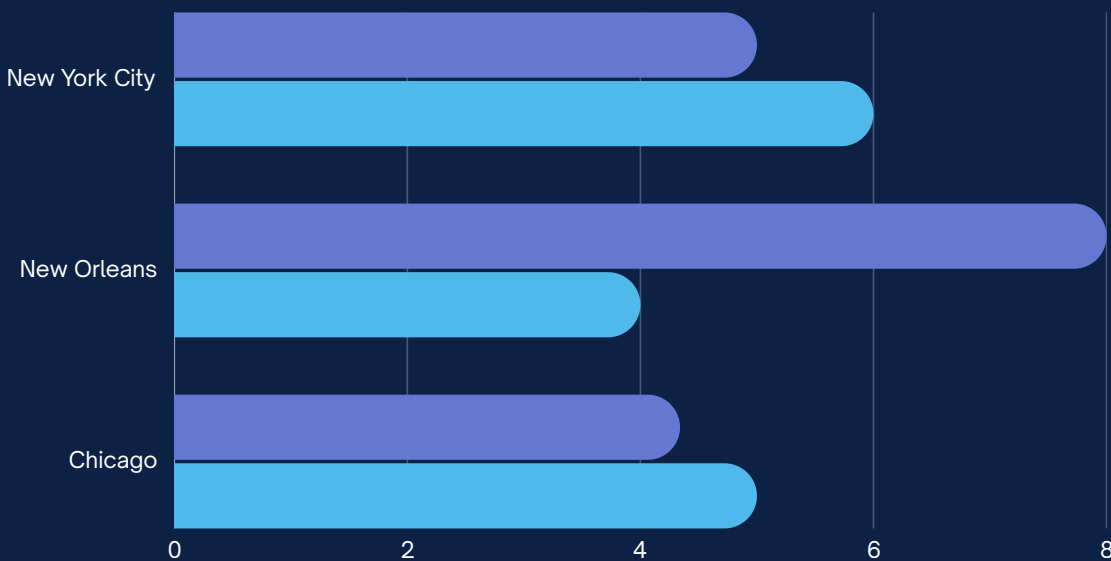


This study will:

- **Develop** a predictive Synesthetic Objective Correlative Glossary, mapping subconscious sensory-symbolic associations across diverse urban populations.
- **Identify** patterns in Sensory Objective Correlative (SOC) Scores across neighborhoods and cities, and analyze how these patterns correspond to participant reports of hospitality, fatigue, overstimulation, or ease.
- **Assess** representations of urban spaces via their objective correlatives as reflected in fiction, nonfiction, and poetry over time, and how these representations reinforce or push against sensory assumptions about these spaces.).
- **Evaluate** accessibility through embodied scenarios derived from scenario-based prompts (e.g., navigating with limited mobility) to reveal systemic barriers to slowness, rest, and movement, highlighting both physical and symbolic forms of exclusion.
- **Compare** SOC and Accessibility profiles across demographic groups (age, gender, occupation, neurodivergence) to uncover inequities in how the same urban spaces are felt, accessed, and interpreted.

Measures

This study focuses on seven global cities: **New York City, Chicago, Houston, New Orleans, Washington D.C., Nanjing, and Copenhagen** chosen for their **distinctive sensory signatures, urban forms, and symbolic resonance** in both global and local imaginaries. Each offers a unique combination of synesthetic, cultural, and infrastructural features that will inform the study's comparative analysis of empathy, norm adherence, and symbolic perception.



Outputs and Deliverables

- **City-specific Empathy Dashboards and Interactive Maps** integrating sensory-affinity data with equity-focused cartographic overlays.
- **Public-facing City Sense Guides**, designed as hospitality and accessibility prototypes for tourism, relocation, and neurodiverse navigation.
- **Synesthetic Objective Correlative Glossary**, functioning as both an academic resource and applied design tool.



Key Analytics

This study operationalizes synesthetic cartography through a multi-tiered analytic framework designed to capture both symbolic resonance and behavioral impact. Metrics are tracked across three phases and six cities, synthesizing literary analysis, guided sensory dyads, immersive 4K/VR interventions, and participant field data.

DATA SAMPLE



- **Symbolic Frequency Analysis:** Quantification of recurrent sensory-symbolic dyads (e.g., color-texture, sound-emotion) in literary texts, resident descriptions, and participant glossaries.
- **Cross-Temporal Representation Index:** Comparative measure of how symbolic correlatives of cities shift across genres (poetry, prose, nonfiction) and decades.
- **Sensory Affinity Clustering:** Machine- and human-guided clustering of participant preferences (smells, textures, sounds, colors) mapped onto city zones, generating predictive emotional heatmaps.
- **Empathy Shift Metrics:** Pre- and post-exposure psychometric scales assessing changes in empathy, trust, generosity, and civic identification after interaction with symbolic overlays or immersive environments.
- **Symbolic Hospitality Score:** Composite index measuring perceived welcome, safety, and belonging based on sensory variables, with particular attention to marginalized or neurodiverse populations.
- **Accessibility Index:** Assessment of how immersive symbolic overlays alter perceptions of civic openness, accessibility, and shared space.

Frameworks

01 Mediated Presence & Environmental Psychology

The illusion of “being there” in a virtual space can evoke real affective and behavioral responses (Lombard & Ditton). In addition, spatial design including light, noise, layout, and color, modulates cognition and mood (Gifford).

02 Surveillance Studies & Moral Norm Activation

Power operates through the feeling of being seen; surveillance is now symbolic, atmospheric, and internalized (Foucault, Koskela, Fang). Further, norms become activated by situational cues; ethical behavior can be primed through design and framing (Cialdini et al.).

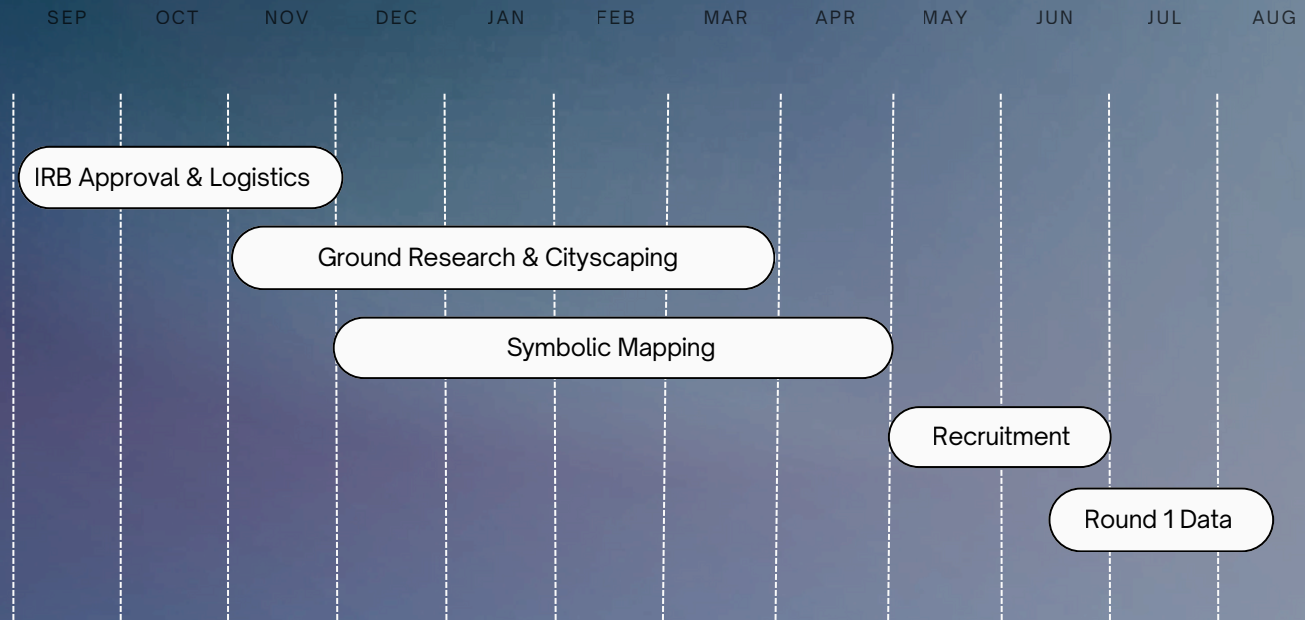
03 Affective Geography & Synesthetic Symbolism

Cities are emotional and symbolic landscapes. We respond not only to structure but to story, memory, and symbol (Davidson, Massey). By aligning immersive environments with “form constants,” designers might evoke subconscious recognition and emotional responses, potentially increasing empathy and generosity toward the depicted environments (Cytowic, Kluver)

Linguistic Theory & The Objective Correlative

04 Language encodes not only description but affect; words summon sensory-symbolic associations that shape how spaces are imagined and remembered (Jakobson, Lakoff & Johnson). T.S. Eliot’s concept of the “objective correlative” underscores how clusters of sensory images can evoke emotion beyond direct statement. Applied to cities, this suggests that urban environments function as living texts whose symbols (names, smells, colors, textures) act as triggers of belonging or estrangement. By tracing these linguistic-symbolic patterns across literature, participant narratives, and cityscapes, the study situates cartography as both a semantic and sensory practice.

Timeline



Phase	Duration	Months
Phase 1: Signal Setting	Late August 2025- Early March 2026	~6-7 months
Phase 2: Testing	Mid March 2026- Late August 2026	~6 months
Phase 3: Analysis	Early September 2026- Late March 2027	~7 months
Phase 4: Distribution	Early April 2027- Early May 2027	~1 month



Email: hastabymichelle@gmail.com
LinkedIn: [HERE](#)

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Thank You
ございます
Gracias
ขอบคุณ
Merci
شكراً