

## Seeing Buildings Without Building Knowledge: How Laypeople Interpret Architectural Images in the Digital Age

Pandian Mahadevan<sup>1</sup>, K. Rajesh<sup>2</sup>

### Abstract

This study explores how everyday people perceive and interpret architectural images in our media-saturated world. Moving beyond traditional expert-focused research, it reveals a crucial shift toward understanding emotional and cultural responses from the general public. Using qualitative methods, the research shows non-experts rely on intuitive frameworks rather than formal design principles when evaluating buildings online. The research argues that architects and urban planners must integrate public perception into their work. This approach fosters inclusive communication and strengthens societal connection with architecture. Understanding how everyday people experience buildings in digital spaces creates opportunities for more meaningful, accessible design dialogue.

**Keywords:** *Architectural Image Analysis; Public Perception; Visual Interpretation; Digital Media; Public Engagement; Imagery of the Built Environment.*

### Introduction

Architecture has evolved from tangible, lived spaces into a discipline dominated by visual representation—photographs, renderings, and digital media. While Architectural Image Studies (AIS) examines how these visuals communicate meaning, current scholarship privileges professional and academic perspectives, overlooking the everyday viewer who encounters architectural imagery most frequently.

**The Missing Voice:** Non-architects as primary consumers of architectural imagery, yet absent from scholarly discourse

**Bridging Theory and Perception:** This research connects academic frameworks with public understanding, examining how laypeople interpret architectural visuals. By centering non-expert perspectives, we gain insight into architecture's broader cultural impact beyond professional circles.

The goal: a more inclusive comprehension of how architecture shapes society through its omnipresent visual representation in daily life.

### Literature Review: Architectural Perception Through Visual Culture

**1960s: Direct Experience:** Rasmussen and Lynch established spatial experience as fundamental to architectural comprehension.

**1990s: Media-Centric Shift:** Colomina recognized architecture as visual and media-centric phenomena, transforming understanding.

**2010s: Digital Platforms:** McQuire identified increasing digital influence, revealing gaps in non-expert audience research.

**Present: User-Centric Need:** Interdisciplinary methodologies required to address empirical research disparities in AIS.

**Visual Perception Research:** Survey methodologies and machine learning quantify public impressions of building facades, revealing perceptual trends across cities and highlighting complexity in architectural image assessment.

---

<sup>1</sup>Nautical Science Department, AMET University (corresponding author).

<sup>2</sup> Nautical Science Department, AMET University.

**Digital Analysis & Engagement:** Street view photography and PPGIS demonstrate that visual technologies incorporate human perception elements but cannot replace direct user experience, affirming user-centered approaches.

**Urban Identity Studies:** Cultural imageability reviews emphasize how cultural elements influence perception and mental mapping of built environments, underscoring cultural interpretation significance.

**Active Narrative Shaping:** Architectural photographs actively construct narratives, ideals, and spatial expectations rather than merely documenting structures (Berger, 1972).

**Cultural Variability:** Visual culture studies reveal images are interpreted differently based on viewers' cultural backgrounds, social contexts, and experiential knowledge (Rose, 2016).

**Specialist Bias:** Architectural discourse often overlooks perception diversity, favoring formalist or semiotic interpretations by specialists (Jencks, 1987).

**Research Gap Identified:** While digital platforms increasingly influence architectural perception, empirical studies targeting non-expert audiences remain scarce, indicating a critical need for interdisciplinary and user-centric methodologies within Architectural Image Studies.

### **Research Gap: Critical Deficiencies In Architectural Imagery Studies**

Current AIS literature reveals significant gaps in understanding how architectural imagery is perceived and interpreted beyond professional circles. These deficiencies limit the field's ability to engage with broader audiences and understand the real-world impact of architectural representation.

**Professional Bias:** Research examines architectural imagery primarily through professional design standards, sidelining popular perception. AIS studies emphasize professional architectural interpretation while neglecting public viewpoints (Ching, 2014).

**Disregard for Public Perception:** Emotional, cultural, and intuitive reactions of non-architects are seldom regarded as valid analytical evidence. These responses are often dismissed as subjective rather than analytically significant (Pallasmaa, 2012).

**Underrepresentation in Digital Media:** Conventional AIS frameworks insufficiently account for social media platforms, image alteration, and virtual representations. Current models inadequately consider digital influence on architectural perception (McQuire, 2013).

**Accessibility of Methodology:** Current theoretical models depend on intricate visual and philosophical frameworks, constraining interdisciplinary engagement. These complex methodologies restrict involvement from individuals outside architecture (Rose, 2016).

**Oversight of Societal Impact:** The influence of architectural imagery on public expectations, identity, and acceptability remains under-examined. Systematic, user-centered research investigating non-expert interpretation is notably absent.

**Research Gap:** There is a critical absence of systematic, user-centered research investigating how non-experts understand architectural pictures and how these interpretations affect public engagement with architecture.

### **Objective Of This Study**

**Understanding How People See Architecture:** This groundbreaking study explores how everyday people—not trained architects—perceive, interpret, and emotionally connect with architectural imagery. By examining the intersection of visual culture, digital media, and built environments, we aim to democratize architectural research and make it accessible to broader audiences.

**Perception Analysis:** Examine how non-architects view and understand architectural photographs, uncovering the visual elements that capture attention and shape interpretation.

**Emotional & Cultural Meaning:** Identify the emotional responses and cultural significances that people assign to architectural images across different contexts and backgrounds.

**Digital Media Impact:** Evaluate how social media, online platforms, and digital technologies influence public understanding and appreciation of architecture.

**Inclusive Framework:** Develop an accessible Architectural Image Study (AIS) framework that empowers non-expert researchers to conduct meaningful investigations.

**Why This Matters:** Architecture shapes our daily experiences, yet research has traditionally been confined to academic circles. By understanding how the general public engages with architectural imagery, we can bridge the gap between professional discourse and lived experience, creating more inclusive conversations about our built environment.

**Expected Outcomes:** Comprehensive analysis of non-expert architectural perception patterns - Framework for democratizing architectural research methodologies - Insights into digital media's role in shaping architectural awareness - Guidelines for more accessible architectural communication

## Methodology

### Research Methodology

Qualitative exploratory design employing open-ended visual elicitation and theme analysis to collect participant interpretations without imposing professional architectural standards. Data Acquisition • Image Selection: Architectural pictures obtained from publicly available digital platforms, encompassing websites and social media. • Participants: 50 persons with varied cultural and educational backgrounds, lacking formal architectural expertise. • Devices: • Catalog of 200 architectural visual stimuli.

Semi-structured interviews

Unrestricted perception surveys

**Data Analysis:** Thematic analysis was employed to examine data for repeating patterns with emotional response, symbolic significance, cultural familiarity, and perceived usability (Rose, 2016).

**Ethical Considerations:** Participation is optional, anonymised, and carried out with informed permission. All subjects granted informed consent, and anonymity was preserved throughout the study.

### Significance Of The Study

This research transforms Architectural Image Studies (AIS) by validating lay interpretation as a critical analytical lens. By expanding AIS beyond professional boundaries, the study bridges the gap between public perception and architectural practice, offering architects, planners, and policymakers invaluable insights into how communities experience and interpret built environments.

**Emotional Impact:** Non-experts prioritize feelings of safety, exclusion, prestige, and familiarity over formal design elements.

**Social Construct:** Architecture functions as a psychological and social entity, not merely an aesthetic object.

**Cultural Significance:** Public interpretation relies on emotional, cultural, and symbolic signals rather than technical terminology.

**Key Research Contributions:** Affirms lay interpretation as valid analytical viewpoint

Broadens AIS scope beyond professional confines - Enhances visual literacy in architectural dialogue - Augments public participation in design decisions

*"Disregarding public perception jeopardizes the alignment between architectural intention and society experience."*

**Theoretical Foundation:** These findings align with visual culture studies (Rose, 2016) and social space theory (Whyte, 1980), confirming that architectural images serve as powerful communicative instruments shaping public expectations and acceptance of the built environment.

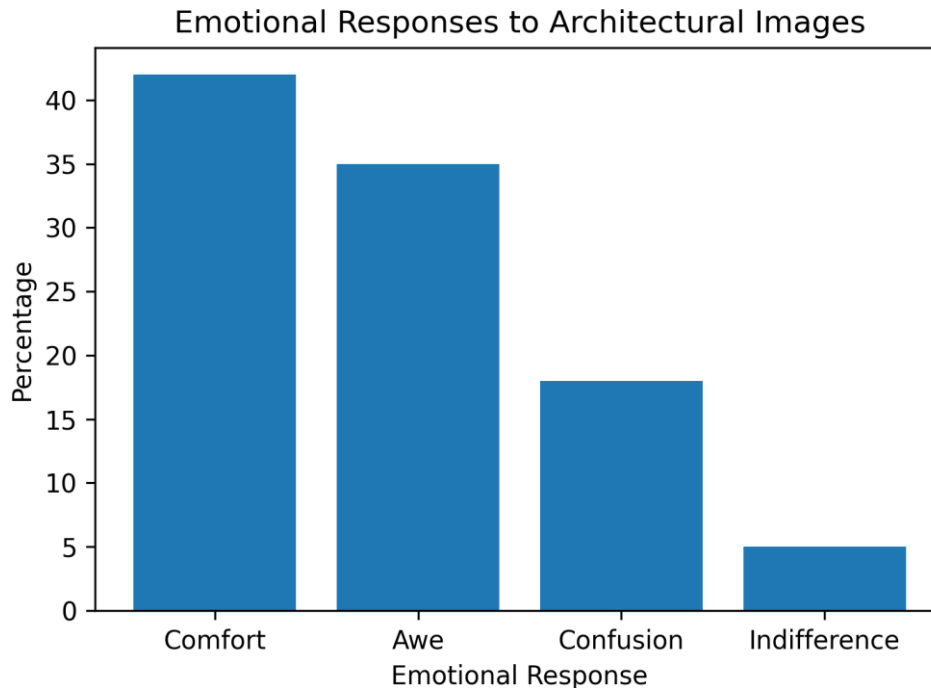
## Understanding Lay Interpretation of Architecture

### Research Findings

A comprehensive study reveals how non-experts emotionally connect with architectural design, emphasizing that everyday observers prioritize emotional resonance, function, and cultural relevance over formal design concepts. The research uncovers distinct patterns in how people interpret and respond to built environments.

### Emotional Response Patterns

The data reveals that 42% of participants expressed feelings of familiarity and comfort when viewing architectural designs, making it the dominant emotional response. Awe and admiration followed closely at 35%, while confusion represented 18% of responses. Only 5% reported indifference, suggesting architecture consistently evokes meaningful emotional reactions.



### Dominant Interpretive Themes

**Social Meaning:** Buildings symbolize societal values and community identity.

"Looks welcoming and inclusive"

**Nostalgia:** Familiarity with home or heritage creates emotional connections.

"Reminds me of my hometown"

**Perceived Function:** Observers guess purpose based on visual appearance and design cues.

"This looks like a museum"

**Key Insight:** Participants emphasize *emotional resonance*, *function*, and *cultural relevance* over formal design concepts, suggesting that successful architecture must connect with human experience beyond aesthetic principles.

### Conclusion

**Democratizing Architectural Image Studies:** Architectural pictures are no more mere representations; they actively influence societal perceptions, acceptance, and valuation of the built environment. This research illustrates that lay perceptions yield essential insights into the societal function of architecture through non-expert interpretations. Incorporating these viewpoints into Architectural Image Studies (AIS) promotes a more democratic and socially attuned architectural dialogue appropriate for the digital era.

**Visual Mediation:** Understanding architecture as a visually mediated public experience is crucial for comprehending its cultural, emotional, and sociological influence in the digital era.

**Non-Expert Insights:** Lay interpretations of architectural imagery qualitatively diverge from professional analysis, representing a significant but inadequately examined aspect of AIS.

**Subjective Responses:** Highlighting subjective and culturally rooted responses enhances AIS and inspires more democratic methods of architectural communication and design representation.

**Transforming the Discipline:** Integrating non-expert viewpoints can transform AIS into a more socially relevant and inclusive discipline, bridging the gap between professional discourse and public experience.

### **Future Research Directions**

Advancing our understanding of architectural perception requires a multifaceted approach that combines expert analysis, emotional measurement, cultural context, and emerging technologies. These five key research directions will shape how we study and implement architectural design in diverse communities worldwide.

**Expert vs. Non-Expert Analysis:** Conduct comparative studies examining how trained architects and general public perceive architectural designs differently, revealing gaps between professional intent and user experience.

**Emotional Response Measurement:** Deploy psychometric instruments to quantitatively assess emotional reactions to architectural spaces, providing data-driven insights into how built environments affect human psychology and well-being.

**Cross-Cultural Perception Studies:** Analyse how architectural imagery is interpreted across different cultural contexts, ensuring designs resonate with diverse populations and respect cultural sensitivities in global projects.

**Public Policy Integration:** Examine policy ramifications for public dissemination of architectural initiatives, establishing frameworks for community engagement and transparent communication in urban development.

**AI-Powered Trend Analysis:** Leverage artificial intelligence image analysis to identify and delineate emerging public perception trends, enabling predictive modeling of architectural preferences and acceptance patterns.

These research directions represent a comprehensive framework for understanding how architecture shapes human experience across cultural boundaries and expertise levels.

## **References**

### **Foundational Sources**

1. Ching, F. D. K. (2014). *Architecture: Form, Space, and Order*. Wiley.
2. Pallasmaa, J. (2012). *The Eyes of the Skin: Architecture and the Senses*. Wiley.
3. Colomina, B. (1994). *Privacy and Publicity: Modern Architecture as Mass Media*. MIT Press.
4. Jencks, C. (1987). *The Language of Post-Modern Architecture*. Academy Editions.
5. Rose, G. (2016). *Visual Methodologies*. Sage Publications.
6. Berger, J. (1972). *Ways of Seeing*. Penguin Books.
7. Rasmussen, S. E. (1964). *Experiencing Architecture*. MIT Press.
8. McQuire, S. (2013). *The Media City*. Sage.
9. Whyte, W. H. (1980). *The Social Life of Small Urban Spaces*. Project for Public Spaces.
10. Lynch, K. (1960). *The Image of the City*. MIT Press.

### **Recent References**

- Liang, X., Chang, J. H., Gao, S., Zhao, T., & Biljecki, F. (2024). Evaluating human perception of building exteriors using street view imagery. *Building and Environment*, 263:111875.
- Akatli, G., & Dinc Kalayci, P. (2024). Spatial perception: A critical bibliometric inquiry. *Journal of Architectural Sciences and Applications*, 9(1), 548–567.
- Wang, L., Zhu, M., & Zhang, Y. (2025). Research on visual design of urban multimedia portal. *Scientific Reports*, 15, 24157.
- Patria, A. H. A., Mohd. Hussain, M. R., & Tukiman, I. (2024). Cultural imageability on urban identity: A systematic literature review. *International Journal of Research and Innovation in Social Science*.

### **Key Theoretical Supports**

- Visual elicitation and image-based research → Rose (2016)
- Architecture as media/image → Colomina (1994)
- Public perception of architecture → Lynch (1960); Rasmussen (1964)
- Digital and mediated urban imagery → McQuire (2013)
- Image realism and expectation formation → Pallasmaa (2012)
- Large-scale image-based perception studies → Liang et al. (2024)