# Verticalizing Public Space: Bridging Between Horizontal and Vertical Public Spaces in Mixed-Use Buildings

Research Plan Proposal Draft by **Jing Han (5768764)**

**Introduction**

The concept of public space can be defined through diverse perspectives, including ownership, democracy, public norms, and contemporary factors. Traditionally, public spaces "often, though not always, originate as a representation of physical space, such as a courthouse square, a monumental plaza, a public park, or a pedestrian shopping district (Mitchell 1995). Goodsell(2003)echoes this sentiment, emphasizing the significance of physical spaces where people can interact visually and audibly. He claims that "The traditional form of the space-time continuum that creates public space is the common physical place where all persons presents are within direct visual and audible range" (Goodsell, 2003). In terms of power, public space can be considered a site of politics and power. As Kilian(1997) stated, "Power exists only in public space. When an individual or a group is excluded from public space, their needs can be ignored. Without access to the public, one has no access to power" (Kilian, 1997).

**Design Problem and Significance**

Despite the understanding from diverse perspectives, in my opinion, all the theories mentioned above regarding public space are rooted in the idea of horizontalism. Traditional perceptions have predominantly revolved around and been limited within the frame of horizontal landscapes and flat surfaces. Yet, as cities worldwide experience vertical growth due to population density and urbanization, the concept of ungrounded public space must be reevaluated. However, there are no comprehensive guidelines regarding vertical public space design. This research aims to suggest a new approach to vertical public space design by addressing the question of how horizontal public space design can inform and guide vertical public space design. In other words, what can we learn from designing horizontal public spaces and apply to vertical public spaces.

**Methods**

I intend to do this through literature review and comparative case studies in three aspects: boundary, threshold, and hierarchy. The findings from this research will be applied in the Mixed-Use Building design in the Public Building graduation studio.

Boundary

In my perspective, boundaries in public spaces establish area divisions with varying levels of privacy and activities. Horizontally, these boundaries can be represented by visible lines such as streets and pedestrian lanes or be defined by invisible lines associated with specific programs. For example, in Parc de la Villette(1982), parallel bands organize diverse programs across the site. What I find interesting is that the concept of fluidity applies to boundaries; not all boundaries are rigid. Fluidity within boundaries allows them to change and adapt over time and according to needs. In his book *Space and Learning*,  Hertzberger(2008)underscores the significance of flexibility, allowing spaces to be reconfigured for different activities (Hertzberger, 2008). As the arrangement changes, the boundaries of areas and programs also

shift. This fluidity in boundaries results in a layout that enables users to personalize their experience, fostering a sense of connection within public space. I intend to delve deeper into this case study, exploring similar design languages applicable to vertical public spaces. By comprehending how these horizontal boundaries function, I can apply analogous strategies to enhance the design of vertical public spaces.

## Hierarchy

Hierarchy, to me, represents a systematic arrangement of individuals or objects based on their importance or priority. This concept holds various interpretations in architecture and the built environment, spanning from conceptual to construction levels.
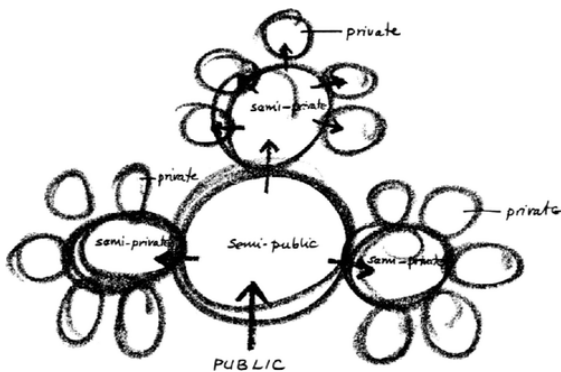


Source: Oscar Newman, *Defensible Space*



Source: https://materialepyramiden.dk/

In spatial design, hierarchy often pertains to accessibility and the level of privacy offered. In horizontal public spaces, hierarchy is delineated into four tiers, as defined by Newman(1973): Public space, semi-public space, semi-private space, and private space (Newman, 1973). This hierarchical framework intricately influences human movement and circulation within the space. When examining vertical public spaces, my objective is to explore the impact of interconnected programs and investigate how hierarchy can manifest uniquely in these environments.

On a physical level, hierarchy in architecture is closely linked to materiality. The properties of materials play a crucial role in expressing spatial quality: opaque and transparent materials facilitate visual connections and indicate accessibility, while the texture of materials contributes to the atmosphere within the space. Material selection is also intertwined with sustainability; the construction material pyramid organizes materials based on their environmental impacts. As a future architect, I strive to build for the future, sustainability becomes one of the vital considerations in designing vertical public spaces. I am intrigued by exploring materiality hierarchy: identifying similarities between horizontal and vertical public spaces and understanding what nuances might be perceived differently.

I believe exploring the layers of hierarchy that involve the interplay of programs, structures, and materiality in horizontal public spaces and translating them into a vertical context enables fresh perspectives to emerge. This transformation affects

how I perceive and design public spaces within vertical landscapes.

Threshold

A threshold, as defined by the Cambridge Dictionary, signifies "the floor of an entrance to a building or room" (Brown and Miller 2013). According to the Collins Dictionary, a threshold is "an amount, level, or limit on a scale", marking the beginning of changes or new developments when reached (Hanks 1995). Hertzberger identified an aspect in the 17th-century painting *The Little Street* by Vermeer that exemplified the concept of a threshold. The transitional area in front of the house and backyard, though private, also extends an invitation to passers-by, resulting in an overlap between private and public realms (Hertzberger, 2015). This quality of a threshold enables a duality to exist, functioning as a platform where two worlds converge rather than imposing rigid boundaries.

Source: www.herzberger.nl

Nevertheless, thresholds encompass a multitude of meanings – physical, psychological, emotional, social, and economic, among others. I am interested in exploring the integration of these diverse meanings into architectural design, highlighting the pivotal role of thresholds in the overall design process, both in horizontal and vertical public spaces.

**Bibliography:**

Mitchell, Don. 1995. The End of Public Space?People's Park, Definitions of the Public, and Democracy. In: *Annals of The Association of American Geographers*, 85:108–133.

Goodsell, C. T. 2003. The Concept of Public Space and Its Democratic Manifestations. The American Review of Public Administration, 33(4), 361-383. https://doi.org/10.1177/0275074003254469)

Kilian, Ted. 1997. *Public and Private, Power and Space*. Rowman & Littlefield.

Newman, Oscar. 1973. *Defensible space: people and design in the violent city*. Architectural Press.

Brown, Keith and Jim Miller. 2013. *The Cambridge Dictionary of Linguistics*. doi:10.1017/cbo9781139049412, https://doi.org/10.1017/cbo9781139049412.

Hanks, Patrick. 1995. *Collins dictionary of the English language*. http://ci.nii.ac.jp/ncid/BA00306412.

Herman Hertzberger, "Transformation +Accommodation", hertzberger, last modified December, 2015 (www.herzberger.nl; accessed on 01 Nov.2023)

Herman Hertzberger, Space and Learning, (Rotterdam: 010 Publishers, 2008): 111.

**Potential reading list:**
Kevin Lynch *The Image of the City* (examined cities from the perspective of a pedestrian, concentrating on the perception of horizontal elements.)
Jan Gehl's studies, including *Life Between Buildings*( concentrated on street-level experiences, reinforcing the prevailing emphasis on flat public spaces.)
Herman Hertzberger *Space and Learning* (investigate threshold, hierarchy, and boundary in educational settings.)
Stan Allen *Landform Building* (study the connections between public space and surroundings.)

**Potential Case Study:**
Parc de la Villette
50 Hybrid Buildings
Delirious New York