

# Shopping for materiality.

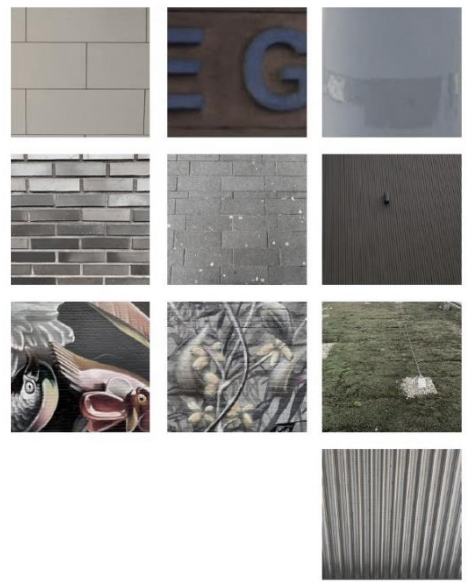
*A design for atmospheres*

Research Paper  
May 17<sup>th</sup>, 2023

Heritage & Architecture  
AR3AH105 Modern  
Malls Studio

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**Abstract**

The article discusses the challenges of revitalizing shopping malls as heritage sites in the 21st century, due to their vacancy and deterioration resulting from depersonalization. The proposed approach called "tabula scripta" embraces the existing layers and context, requiring a broadening and deepening of the profession of architecture to focus on sensory perception, particularly tactile experiences. The article highlights the homogenization of architecture due to a reduction in observation by designers and suggests the use of natural materials to convey age and multiple layers of development. The research project focused on the materiality and design of shopping malls, particularly the Lijnbaan ensemble in Rotterdam and the Leyweg shopping mall in The Hague. The results revealed the loss of coherence over time and the need for culturally sensitive interventions in the Leyweg mall. The discussion highlights the importance of site-specific design, particularly in the unique cultural context of the Morgenstond district in The Hague, emphasizing the need for

interventions that account for specific materiality and reflect diverse community experiences.

**Introduction**

Shopping malls have been subject to change since their inception due to social transformations, digitalization, the introduction of online shopping, loss of materiality, and increasing sensory flatness, among other factors. These changes have fostered the depersonalization of shopping malls and have made them subject to vacancy and deterioration. The revitalization of the mall as 20th-century heritage presents challenges for designers and architects to meet the demands of the rapid and ever-changing 21st century. To accomplish this task, it is essential to embrace the opposite concept of tabula rasa, the narrative that many architects and designers use and leads to an incomplete vision, analysis, and interpretation of the values and attributes of a heritage site. This is the approach of tabula scripta, a tool to connect existing layers and consider the existing context carefully. (Alkemade et al., 2021)

Tabula scripta is an approach to dealing with complexity in multiple layers in the built environment that requires a broadening and a deepening of the profession of architecture. Alkemade et al. (2021, pg21), express this as a broadening in scale, content, and interdisciplinary cooperation, and deepening as a specialization that runs profound in terms of methodology, techniques, and craftsmanship. The deepening will be approached on a more tangible and personal scale to comprehend the depersonalization of malls that has led them to vacancy and deterioration. The sensory perception approach is an essential aspect of this deepening scale.

Senses are commonly described as passive receivers of outer stimuli; however, psychologist James J. Gibson regards the senses as aggressively seeking mechanisms (Bloomer and Moore, 1977, p33). These are in a constant quest and find connections everywhere, for instance, gravity is measured by the bottom of the foot. We trace density and texture of the ground through our soles. In this context, the

connection of the senses to the built environment is of relevance since the qualities of space, matter, and scale are measured equally by our senses. Even though we perceive with all our senses, the first barrier and medium for sensory communication is the skin. It is described as "the mother of senses" (Montagu, 1986, p3) since all of them, including vision, are extensions of the tactile sense and is considered that sensory experiences are modes of touching and are therefore related to tactility (Pallasmaa, 2012, p12).

In this architectural relevance towards the sense of vision, it is important to reference *The eyes of the skin, architecture and the senses* when it affirms that the eyes are constantly wanting to interact with the other senses, particularly with tactility since visual observation is often confirmed by touch. It is possible to describe tactile sensations as the unconscious of vision; as the eyes stroke distant surfaces, contours, and edges, tactility, therefore, determines whether the experience is pleasant or unpleasant. George Berkely, an Irish philosopher had this

stance where "vision needs the help of touch, which provides sensations of solidity, resistance, and protrusion" (Levin, 1993, p100). In addition, Hegel claimed that "the only sense which can give a sensation of spatial depth is touch because touch senses the weight, resistance, and three-dimensional shape of material bodies, and thus makes us aware that things extend away from us in all directions" (Pallasmaa, 2012, p 40).

The notion of drivers of change that the Tabula Scripta research group is embracing as part of its attitude towards architecture, supports this research since the alienation or depersonalization of modern malls can be addressed with a fusion of the broadening of actions and the deepening towards tactility and materiality. This combination of the analysis and interventions towards the context, and a merging of vision and tactility, can contribute to this approach to grasping our layered reality.

### **Problem statement**

Architecture has traditionally been seen as a visual art form, with the eye being

the protagonist of the perceptual reality in the field. However, this has resulted in a conditioning of perception that neglects the other senses, leaving a lack of tactile relationship with the user. This trend has become increasingly prominent in modernist design, which has prioritized the eye over other receptors of the body (Pallasmaa, 2012, p 20). Since the 1950s, there has been a growing focus on advertisement and striking visuals in architecture. Buildings have become flat, polished, shiny, reflective, and sharp, with an emphasis on immaterial and unreal elements according to Juhani Pallasmaa in *The eyes of the skin*. This has led to a loss of plasticity and homogenization in architecture, which is particularly evident in shopping malls. The absence of craftsmanship in material production has resulted in a visual scenography that lacks the genuineness of substance and construction (Pallasmaa, 2012, p 30).

The reduction in observation by designers has also contributed to the removal of layers and the destruction of qualities that remain unrecognized. This

has led to the elimination of differences related to uniformity in cities and unidentifiable historical layers in heritage architecture (Alkemade, F., et al. 2021, p 22). Transformations in the built environment must be treated and navigated carefully, always considering their context, which extends from the past to the present and the future. Natural materials offer a solution to this problem, as they express depth, veracity, and imperfection; they also show their age, the track of time, and the multiple layers they have developed in patinas. This complexity in materiality is absent in materials used today, which do not convey essence or age. The flatness of today's standard construction is strengthened by a weakened sense of materiality. (Pallasmaa, 2012, p 30)

Architecture must move beyond the visual and prioritize the senses as a whole. Designers must observe carefully and navigate transformations in the built environment with sensitivity and context in mind. The use of natural materials can help to convey a sense of genuineness and age, which is absent in

modern construction materials. By doing so, architecture can regain its plasticity, tactility, and authenticity, and become a more enriching and meaningful experience for the user.

Modern Malls with their respective interventions are not exempt from this materiality flatness, intention of ageless perception, nor elimination of differences in historical layers. The researched malls for this studio were designed and built during the post-war period when the focus was set on architecture for the eyes. This problem inspired the research question for this analysis:

*How can tactility through materiality be applied in the redesign of a modern shopping mall in the Netherlands, with the tabula scripta approach?*

The following sub-questions will aid in the structure and finding of the main question:

*How can materiality be identified in the attributes of a shopping mall?*

*How can tactility be identified in the attributes of a shopping mall?*

How can the tabula scripta approach be identified in a mall?

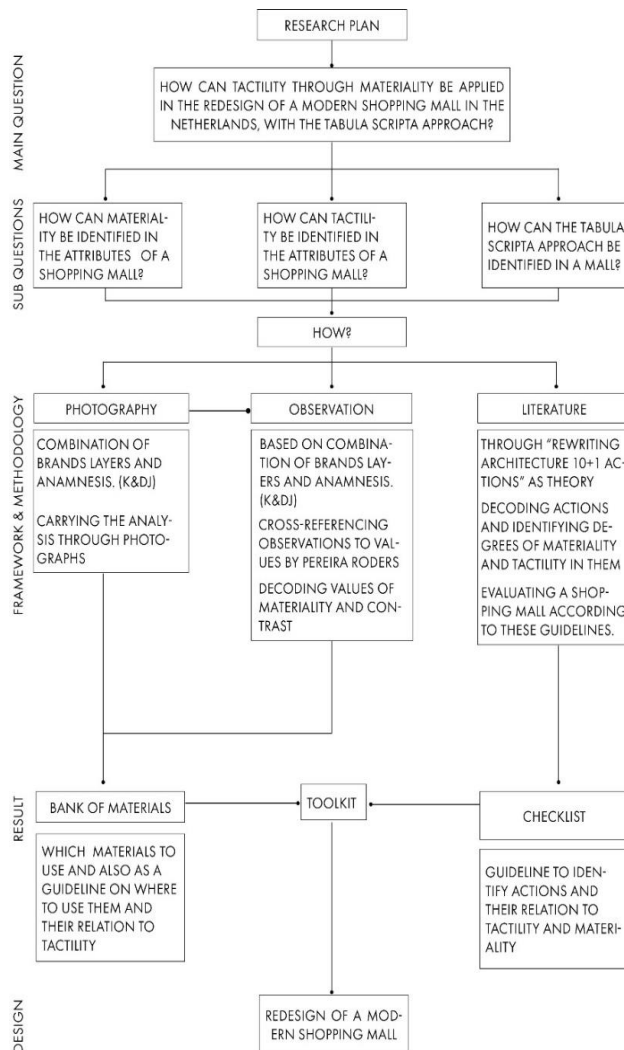


Figure 1 Overview of research plan

## Research framework and methodology

The text describes the research framework and methodology for a study that aimed to understand the relationship between tactility, materiality, and shopping malls. To

achieve this, the research used a combination of literature, values, and attributes, along with a set of interventions to analyze the tangible attributes and layers of a building. The method outlined by Kuipers and de Jonge in their book, *Designing from Heritage (2017)*, was used to assess these attributes and layers. This method combined Brand's layers and Anamnesis to systematically observe a building and assess its physical coherence and the different rates of change in pre-defined layers.

The attribute assessment was based on Brand's six layers: site, structure, skin, services, space plan, and stuff, to determine what was valued in the shopping mall's surroundings, exterior, and interior. The book, *Rewriting architecture, 10+1 actions: tabula scripta* (Alkemade et.al., 2021), was used as a theory to identify the elements within different actions that specifically linked the last sub-question to one of them. The selected works in the book were linked to eleven different investigated approaches or actions that embraced the context: eliminate,

continue, obscure, reconfigure, repurpose, densify, copy, overlay, reimagine, (re)start, and abstain.

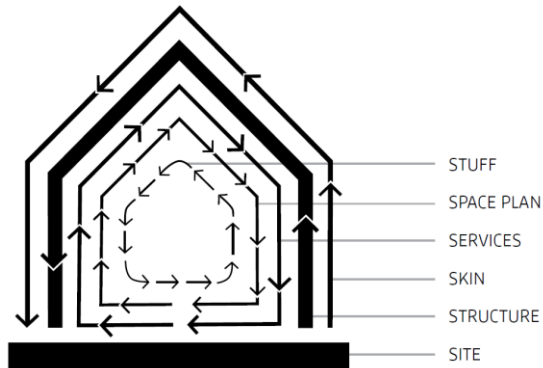


Figure 2 Steward Brand's Shearing Layers diagram adapted by Kuipers and de Jonge

The methodology for this research consisted of three parts. The first part was the use of existing data, such as literature. The second part was conducting research by using photography. The third part was using observation based on materiality and tactile perception gathered from people. This threefold methodology was based on William Freudenburg's outline of a three-part approach that should result in a triangulation of methods that complement each other and aided with the assessment of heritage values (M. Randall, 2002).

In this study, the research methodology involved a multifaceted approach that

combined several tools and frameworks to explore the materiality and tactile dimensions of architectural design, with a specific focus on the Lijnbaan mall in Rotterdam. The research began with the use of Kuipers and de Jonge's method for photographic documentation, which was guided by an incorporation of building anamnesis and Brand's layers, with a particular emphasis on the materiality-related questions established in *Designing from Heritage* (2017). In addition, the study involved observing and describing how people physically interacted with materiality through their sense of touch. To contextualize these observations, the research drew on *Rewriting architecture, 10+1 actions: tabula scripta* (Alkemade et.al., 2021), which was used as a literature base to identify the components of the eleven actions and their degree of relation to tactility and materiality. Overall, the study produced a checklist based on the results, which can be used to evaluate the extent to which these actions were applied in mall intervention strategies, and whether tactility and materiality



were relevant considerations in those interventions.

To fully comprehend the significance of these findings, it's essential to first understand the architectural context of the Lijnbaan. This shopping mall located in Rotterdam, is a significant example of post-war modernist architecture and is recognized as one of the first pedestrian-only shopping areas in Europe. Designed by Dutch architects Jo van den Broek and Jacob Bakema in the 1950s, the mall's design was groundbreaking for its focus on function and efficiency, as well as its innovative use of materials like steel and glass. The Lijnbaan's modernist design departed from traditional Dutch architecture and set the stage for the development of commercial architecture around the world. This case study was the focus for the application of the methodology stated previously, to see how its design and materiality have contributed to its historical significance and enduring relevance in the field of architecture (Cultuurhistorische waardestelling, 2008).

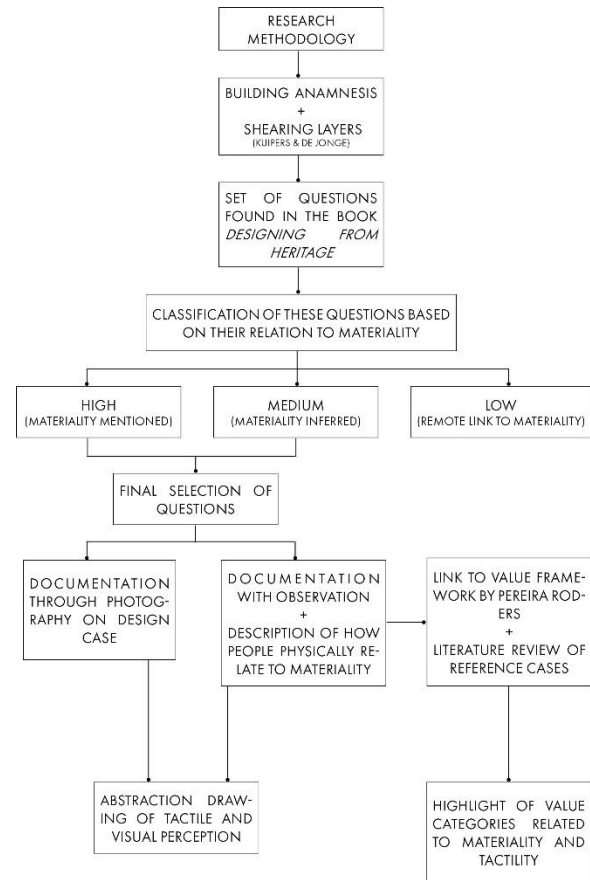


Figure 3 Methodology analysis

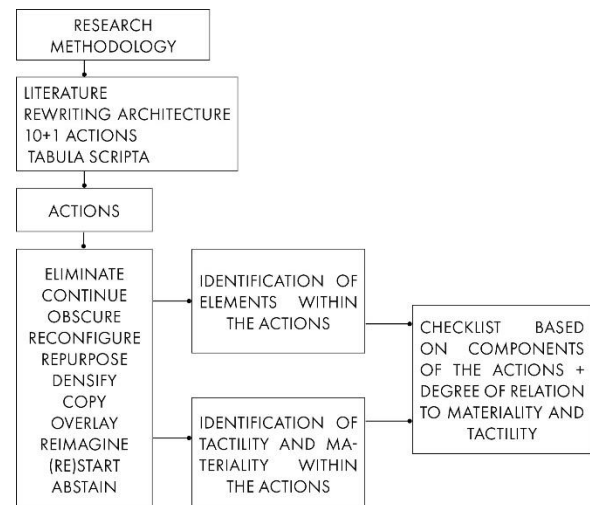


Figure 4 methodology literature

## Results

The initial part of the results of this research consists of the photo documentation based on *Designing from Heritage* which proved to have little to no tactile relation between user and the materiality of the building or its surroundings. Some of the questions posed in the research methodology were not able to be answered in the Lijnbaan ensemble due to the difference between the interior of shops and nonvisible architectural elements within the complex (see Appendix 01). This was followed by the decoding of some of the actions in *Rewriting architecture* which set a checklist or guideline to understand and decode each of the useful actions for the project to develop (see Appendix 02).

The research methodology comprised two main parts: firstly, photographic documentation of the Lijnbaan was conducted, with an emphasis on capturing its materiality as a heritage complex. Secondly, an analysis of the mall's materiality was carried out to gain deeper insights into the role of materials in the design. Six cultural-

historical values were identified within the Lijnbaan ensemble: a measurement system, four typologies, regularity and freedom, plastic, continuity from the inside out, and materialization and color. These values were intended to serve as a guideline for the revitalization of the shopping center. (Stadsontwikkeling Rotterdam, n.d.)

The first identified value is based on a grid of 1.10m for the facades and general floor plan. Concrete columns with larger dimensions are placed every 2.20m within this grid. The second value consists of a diversity of typologies for different shop owners' needs, including options for basements or mezzanines. The third value is characterized by regularity in binding elements, such as canopies, flat roofs, concrete columns, and pillars, with freedom found on the ground floor and infill on the first floor. The plastic value is visible in the non-load bearing concrete columns on the facade, while continuity from the inside out is achieved through recessed shop fronts, island shop windows, large transparent fronts, canopies, and inward-facing paving. The final

identified value, materialization and color, includes smooth concrete finishes in the columns, stone aggregate finishes in the panels between the columns, white finishes in the steel frames, and natural lacquered spruce slats (see Appendix 03). The canopy and superstructure are fixed in color and material, providing unity to the ensemble while allowing for individual variation among the shops (see Appendix 04). However, the corner and link buildings within the Lijnbaan ensemble do not conform to these values, as they have different layouts and overall designs. Located in important urban locations, they have a larger shop volume, a freer shape, a specific appearance, and a different color scheme than the other Lijnbaan shops. (Stadsontwikkeling Rotterdam, n.d.)

The Lijnbaan complex was once a shining example of architectural unity, with its recognizable size, materiality, and color scheme visible in the promenade, shop fronts, and interiors (see Appendix 05). However, over time, renovations have caused a loss of this

coherence. The increasing influence of retail chains has also contributed to a decrease in exclusivity, leading to the standardization and simplification of shop fronts with larger glass surfaces. The back facades have been uniformly finished, erasing their previous distinctiveness (Cultuurhistorische waardestelling, 2008). With these changes in mind, the research dived deeper into the relationship between materiality and shopping centers, shifting the focus towards the design case chosen: the Leyweg shopping mall in The Hague.

Located in the Morgenstond neighborhood with a significant migrant population, the construction of the Leyweg mall was completed 1964 (see Figure 5) and has undergone various minor interventions throughout the years. In 2003, the most significant renovation took place, which included covering the Vroom & Dreesmann department store (see Figure 6), a historically important structure in the Dutch context, with the same materials used for the new construction. This resulted in the removal of an important

historical layer.



Figure 5 Vroom & Dreesmann view 1987 (Haags Gemeentearchief, n.d.).



Figure 6 Vroom & Dreesmann view 2023 (Haags Gemeentearchief, n.d.).

Despite the heavily modified exterior of the former V&D building, its interior contains significant architectural heritage value. The building's concrete mushroom columns are one of its most valuable features (see Figure 7), showcasing the building's modernist design and structural innovation. Although these columns are now obscured from view by a lowered ceiling, they remain an essential

element of the building's architectural character. One of the main façades of the department store showcased crossed escalators that were highly recognizable and remain an important tangible attribute of the former V&D (see Figure 8). Additionally, the building's interior materiality, composed mostly of brickwork, wood, and stone tiles (see Figure 9), offers valuable insights into the building's construction history and cultural context. The original terrazzo tile floors, which were designed to guide circulation within the building, remain intact and are a testament to the building's original design. The wooden floors, which once housed shops and other commercial spaces, also offer a glimpse into the building's past use and contribute to its overall architectural significance. Moreover, due to the building's first design as a department store, the volumetry of the building is almost square, resulting in a lack of natural light in the interior. Additionally, the building only had windows on two façades, further contributing to this lack of natural light.



Figure 7 V&D interior, original floors and mushroom columns hidden under lowered ceiling. (Laguna, A., 2023)



Figure 8 Crossed escalators at V&D main façade (Haags Gemeentearchief, n.d.).

As part of the research carried out in Leyweg, a photographic documentation of the materiality of the V&D building, which began its construction in 1953, was carried out (see Appendix 06). The purpose of this documentation was to understand the historical value of the building and to identify the materials and techniques used in its construction. In addition, the research also includes visual

documentation of the materials found in the extension of the shopping center. Through the documentation of the materials used in the intervention, the research was able to gain a better understanding of the interplay between the new and old materials in the mall and how they complemented each other.



Materials found at V&D

Figure 9 original materials found at former V&D 2023

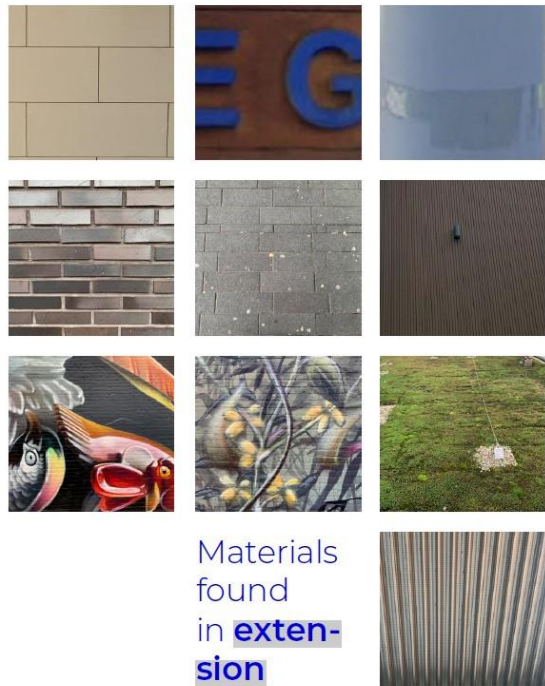


Figure 10 materials found at the 2003 extension of the Leyweg shopping mall

This proved crucial in preserving the building's heritage value and highlighting the importance of materiality. Additionally, the research methodology used in the renovation provided valuable insights into the new materials used and how they interacted with the existing materials in the mall's surroundings. However, it was found that the new materiality did not establish a strong tactile relationship with the user, except for the surfaces that require physical contact. Despite this, the documentation provided valuable insights into the role of

materiality in shaping the mall's design and heritage value. By analyzing both the historical building and the extension, this research gave a comprehensive understanding of the materiality of the area and identified spaces where culturally sensitive interventions could be made. This approach can allow to develop tailored interventions that respect the historical significance of the V&D building while incorporating new materials that reflect the cultural context of the community.

The research initially focused on materiality and tactility but recognized the modernist movement's neglect of other senses. This trend is evident in the design of Leyweg shopping mall and other aspects of modern architecture. In Leyweg, the lack of cultural relevance in materiality was identified as a challenge. However, materials themselves have the potential to create atmospheres that mediate between architecture and users (Löschke, 2016, p. 3). Gernet Bohme's concept of atmosphere introduces an immaterial aspect that impacts spatial reception and determines possible experiences

(Löschke, 2016, p. 3). With this concept as a foundation, the research applied the strategies outlined in Peter Zumthor's book *Atmospheres* to decode the constituent elements of atmosphere for the redesign of Leyweg shopping mall.

Despite not being employed to explore how atmospheres were utilized in the examined shopping malls, the book by Zumthor remains significant because the themes of materiality and tactility, which are key focal points of the research, are crucial in the creation of atmospheres. Thus, it served as a point of reference for developing a new intervention strategy for the Leyweg, emphasizing the two aforementioned themes to foster an engaging and memorable atmosphere for visitors.

The book's nine chapters were translated into a more concrete architectural language for easier application. This approach emphasizes the importance of considering the unique cultural context of the area and designing interventions that are sustainable, functional, and culturally appropriate.

The exploration of architecture in this book dives into various aspects of a building and how they affect its occupants. It begins by describing the physical mass of a building and how it functions as a membrane or covering that can be interacted with. The following section examines the interactions between different materials and how their properties create a unique appearance and radiance that changes depending on factors such as light and position. Another area of focus is the acoustic properties of a space and how its shape and surface materials can affect sound amplification or collection. The text also considers the psychological and physical aspects of temperature and how they affect a person's experience within a space. The role of architecture in creating receptacles for personal objects is also explored, as well as how movement and sequence are involved in designing a space. The thresholds, crossings, and transitions between the inside and outside of a building are highlighted in another section, emphasizing how the building's façade plays a significant role in revealing or concealing what lies

within. The relationship between occupants and the building's mass, size, and scale, as well as the contrast between interior and exterior forms, is also considered. Finally, the book by Zumthor explores how light affects a building's appearance and how it can create new masses and shadows. It systematically examines how materials and surfaces reflect light, contributing to a building's overall appearance. (Zumthor, 2010).

These nine chapters have provided a comprehensive understanding of the different aspects of atmosphere, such as the physical mass of a building, the interaction between materials, acoustic properties, temperature, surrounding objects, movement, threshold and transitions, levels of intimacy, and the impact of light. These concepts can be used to create a culturally relevant and sensory-responsive shopping mall redesign that enhances the experiences of users.

## **Discussion**

Throughout the research, the design case located in the Morgenstond district in The Hague was the primary

focus. This choice highlights the necessity of taking a site-specific approach to design that accounts for the area's unique cultural context. By prioritizing the distinct characteristics of the Morgenstond district, the research underscores the importance of designing with the specific attributes of a location in mind, rather than adopting a universal approach that disregards the cultural traces that shape a community's identity. The district is a multicultural hub with diverse social and cultural needs that distinguish it from other homogeneous neighborhoods in the Netherlands. The population of Morgenstond includes a significant number of non-native Dutch residents, which necessitates a responsive approach that addresses the specific needs and requirements of the community. (All Charts Morgenstond, 2023).

Redesigning the mall aims to address the need for integration, mental health, community activities, and social interaction, as migrant communities have significantly lower mental health perceptions than the Dutch population



average (Appendix 07), and young people's mental health has worsened during the COVID-19 pandemic (Rapportage Integratie en Samenleven, 2022). According to Statistics Netherlands (2022), 18% of young people aged 12 to 24 were mentally unhealthy in 2021, up from 11% in 2019 and 2020, with a higher share of women and young adults reporting negative emotions. The article *People-centric care* by Woods Bagot emphasizes the importance of people-centric design in healthcare, which prioritizes the individual, customization, and comfort to create an intuitive and welcoming space that considers each user's health and well-being. This approach reframes healthcare as an ecosystem in which patients, professionals, students, families, and the community work together in harmony, recognizing health as a basic human right.

In *Rewriting Architecture* (Alkemade et.al., 2021), the identified intervention actions are site-specific, meaning they cannot be applied universally as each site has its own unique tangible and intangible attributes that need to be

preserved and respected. The actions need to be decoded based on the specific site's characteristics to determine which one is most suitable to apply. As an example, the Leyweg shopping mall in the Netherlands would benefit from the elimination of barriers to allow more natural light into the building's center, creating a variety of atmospheres and enhancing the users experience. This approach contrasts with the challenges faced in the former V&D building, where the building's original design as a department store resulted in a lack of natural light in the interior, and where windows were only present on two façades. Despite these limitations, the building's architectural heritage value is still significant, and careful consideration must be given to any intervention actions that may affect it.

Materiality in architecture is specific and context-bound, as demonstrated in this research and design approach. When considering how to apply tactility through materiality in the redesign of a shopping mall in the Netherlands, it is important to recognize that this

approach alone may not be sufficient to address the alienation between users and their immediate built environment. Instead, the creation of atmospheres can provide a more holistic design solution that engages all the senses and considers both the physical and cultural contexts. Atmospheres can be shaped, modified, and tailored to suit the project and its users, creating a design that evokes familiar spaces, culture, and sensations.

### **Conclusion**

The study focused on the materiality and design of atmospheres in the multicultural Morgenstond district, where the renovation of the Leyweg shopping mall in 2003, which involved covering the historically important Vroom & Dreesmann department store with the same materials used for new construction, removed an important historical layer. However, despite the heavily modified exterior, the interior of the former V&D building retains significant architectural heritage value. This highlights the importance of understanding the specific materiality

of a site when developing interventions for heritage projects.

A generic approach to materiality was found to be ineffective in this context, highlighting the need for interventions that account for the unique materiality of the area. When developing interventions for post-war shopping malls in the Dutch context, the research highlighted the importance of understanding the specific materiality of the area and creating culturally sensitive interventions that meet the population's specific requirements. By doing so, interventions can be made that are sustainable, functional, and culturally appropriate, fostering a sense of ownership and engagement with the space among the community. Accounting for the neighborhood's distinct materiality ensures that interventions are effective and culturally sensitive, contributing to the overall success of the project.

Future research in the field of materiality and design interventions for multicultural neighborhoods should focus on unraveling how materiality can be approached through redesign.

There is a need for more exploration and understanding of the unique material culture of a neighborhood, as well as how it can be utilized in interventions to create a sense of place that reflects the diverse cultural and social experiences of the community. This will require a multi-disciplinary approach that draws on knowledge from architecture, anthropology, sociology, and other related fields. The use of participatory design methods, where community members are involved in the design process, can also be effective in ensuring that interventions are appropriate and effective for the community. Ultimately, the goal of future research should be to develop a more nuanced understanding of the role of materiality in the design of culturally sensitive interventions that meet the specific needs and experiences of the diverse populations in multiethnic neighborhoods.

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