Reflection Paper

HERITAGE & ACHITECTURE
Resourceful housing: Adapting 20th Century Heritage

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Graduation Studio
Heritage & Architecture
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07.

Reflection

This chapter reflects on the graduation process, examining the relationships between the graduation project, the master track, the program, the research approach, the obtained results, the research into design, and the design process.

Sloterplas: ziel van Nieuw-West. Al Het Nieuws Uit Amsterdam Nieuw-West (Hartvelt, 2022)

7. Reflection

The relationship between the graduation project topic, the master track (AR), and master programme (MSc AUBS)

The graduation project " Improving Neighbourhood Satisfaction in Post-War Neighbourhoods – Architectural Design Strategies for Liveability" has a fundamental relation to the master's program "Architecture: Adapting 20th Century Heritage: Resourceful Housing." The project's emphasis on improving the liveability of post-war neighbourhoods while maintaining their inherent heritage values corresponds with the primary goals of the master track.

The master track examines the multifaceted challenges of preserving historical value, adhering to modern standards, and reaching a circular economy efficiently. This graduation project examines ways for revitalizing post-war housing to enhance neighbourhood satisfaction and overall liveability in response to these issues. This method is especially relevant considering the widespread challenges encountered by post-war neighbourhoods in European cities, which, despite their original progressive design, have frequently become linked to social and economic difficulties (Argiolu et al., 2008). The emphasis on neighbourhood satisfaction as a key factor in addressing the issues of "problem neighbourhoods" is based on comprehensive research. The study evaluates multiple dimensions of liveability, such as the built environment, social cohesion, amenities, and safety, utilizing data from the biennial survey conducted by Amsterdam's 'Onderzoek & Statistieken' department (Dienst Onderzoek en Statistiek, 2007). This comprehensive approach to liveability, incorporating physical, social, and economic dimensions, corresponds with established academic frameworks (Camagni et al., 1997).

The current approach to tackle liveability uses includes architectural changes to improve the physical environment. By creating more high-quality housing in a mixed neighbourhood, liveability and safety in neighbourhoods should improve. This approach includes the restructuring of low-quality housing, which included replacement new construction, intensive and large-scale renovation and preservation and transformation of property into housing (Minesterie van Binnenlandse Zaken en Koninkrijksrelaties, 2022). While current approaches to improving liveability often involve large-scale renovation or demolition-reconstruction ('sloop-nieuwbouw') methods, this project seeks to address the potential loss of cultural and architectural heritage, particularly in areas like Nieuw-West (B. Kok, 2021).

The project targets the lowest-scoring neighbourhoods in satisfaction in Amsterdam Nieuw-West, to formulate design strategies that improve liveability while preserving the heritage of post-war architecture. The emphasis on the resourceful preservation of 20th-century history, illustrated by the case study of a typical post-war porch structure in Osdorp, reflects a dedication to sustainable and circular economic principles. This approach not only corresponds with the master track's focus on resourceful housing but also contributes to the wider domains of Architecture, Urbanism, and Building Sciences by exploring innovative strategies for heritage revitalization and liveability improvement.

The influence of research on the design/recommendations and the influence of the design/recommendations on the research

The research conducted for this graduation project substantially impacted the design strategy and recommendations. The iterative interaction between research and design was essential in formulating a comprehensive and context-sensitive approach to enhancing liveability in post-war neighbourhoods.

The research started with a study of the historical background of the Western Garden Cities, using existing knowledge and studies.

This foundation was further enhanced through a qualitative research methodology, incorporating interviews with inhabitants from two low scoring neighbourhoods in Amsterdam Nieuw-West. The interviews, conducted in conjunction with peers, utilized the "Ballarat Imagine" methodology, which promotes a positive reimagining of the neighbourhood by inhabitants. The interviews, although centred on neighbourhood-level impressions, yielded significant insights into inhabitants' views and needs.

The interview data was systematically analysed using Ana Pereira Roders' qualitative Value Framework, allowing for a structured understanding of residents' priorities. This analysis revealed patterns in how residents value different aspects of their neighbourhood. In retrospect, while the interviews provided valuable direction, a more focused set of questions specifically addressing architectural elements could have yielded even more precise insights for the design process.

Complementing the qualitative research, a literature review was conducted, exploring four dimensions of liveability: functional environment, physical environment, social cohesion, and safety. This review, drawing from seminal works like Jane Jacobs' "The Death and Life of Great American Cities" and contemporary studies on urban liveability, provided an overview for understanding how architectural interventions can influence these dimensions at various scales.

The integration of the interview findings and the literature evaluation constituted the foundation for addressing the main research question. This integration led to the creation of liveability 'design strategy cards', structured through a pattern language methodology influenced by Ganesh Babu's master's

thesis. These cards, organized by theme, value attributes, and scale of applicability, functioned as a pragmatic instrument connecting research findings with design interventions. In the design phase, these strategy cards were essential in resolving specific issues found in the design case study. The card-matching method for design difficulties indicated that certain strategies were more generally relevant to social heritage, whereas others targeted more specifically to architectural interventions. For instance, strategies related to 'housing differentiation', 'mixed-use programming', and 'natural surveillance' were found to be more building specific, while others like 'heritage sensitivity' 'energy efficiency & sustainability' and 'greenery integration' were more general.

Assesment of the value of the way of working, the approach, used methods and methodology

The methodology employed in this research project demonstrates an intentional and iterative process that connects theoretical comprehension with actual implementation. The development of liveability design strategy cards, derived from comprehensive research, functioned as an valuable tool for converting research findings into practical design interventions. The decision to utilize the design assignment as a testing ground for these ideas on a specific building typology, which had arisen during the feedback process, was a beneficial approach. This approach allowed a more focused application of the research results, permitting an in-depth examination of how general principles could be modified to address building typology-specific issues. The method of associating each detected problem with a relevant strategy card and thereafter examining diverse design alternatives demonstrated a systematic and comprehensive approach to problem-solving.

The methodology's strength is attributed to its flexibility and adaptability. The research showed that there is no generic solution in architectural interventions by evaluating many options for every problem. This approach resulted in the selection of the best possible option for the particular case study and produced a variety of possible solutions applicable to other porch buildings in diverse contexts. This aspect of the methodology enhances the wider application and significance of the research findings. Understanding that any applied strategy possesses advantages and disadvantages is an essential component of the methodology's significance. For instance, the consideration of how implementing natural surveillance by opening up the plinth might necessitate relocating existing storage spaces illustrates a holistic approach to design thinking. Similarly, the acknowledgment that introducing mixed-use spaces might require trade-offs in the amount of dwellings demonstrates a nuanced understanding of the complexities involved in the buildings' redevelopment. However, it is important to realize that this approach also entails limitations. The methodology allows the testing of options on a single typology, although it may not adequately consider the distinctive contextual elements of any individual building or neighbourhood. The transferability of solutions across different contexts, although useful for broad applicability, may require careful consideration and adaption in practice.

This methodological approach is valuable for combining theoretical research with actual design applications. The methodical evaluation of techniques, along with the assessment of their wider consequences, establishes a strong foundation for tackling liveability challenges in post-war housing. This method enhances the particular case study while providing useful insights and a reproducible framework for similar urban redevelopment and heritage adaptation initiatives. The acknowledgement of emerging difficulties from each intervention highlights the dynamic and iterative characteristics of the design process, underscoring the necessity for flexible and adaptive solutions in urban planning and architecture.

Assesment of the academic and societal value, scope and implication of the graduation project, including ethical aspect

The academic and societal value of this graduation project can be assessed through various perspectives, taking into account its contributions to existing knowledge, practical applications, and ethical implications. This research project identifies a gap in the current literature by concentrating on enhancing liveability through architecture in heritage contexts, a domain that remains insufficiently examined despite extensive studies on liveability and the impact of the physical environment. The creation of design strategy cards that intentionally connect general liveability aspects to particular architectural interventions signifies an innovative method, offering a systematic framework for converting abstract concepts of liveability into tangible design strategies. This methodology provides a as a tool for researchers and practitioners in urban planning and architecture.

The project's societal significance is clear in its capacity to tackle modern urban issues. The project prioritizes enhancing liveability in post-war neighbourhoods, aligning with overarching societal goals related to revitalization and sustainable development. Implementing evaluates for housing differentiation and promoting social interaction enhances inclusivity and social cohesion, while also providing possible solutions for the Dutch housing crisis by demonstrating how post-war structures can be modified and improved instead of demolished.

The research focuses on Amsterdam Nieuw-West, offering a specific contextual analysis, however the developed design strategies possess wider relevance. The multi-scale approach, which includes building, street, and neighbourhood levels,

increases the project's adaptability, enabling adaptation of strategies for diverse urban contexts and potentially impacting revitalization practices beyond the immediate study location. The research demonstrates how post-war structures can be revitalized by intentional changes, so enriching the discourse on sustainable urban development and the conservation of 20th-century architectural history.

Ethical considerations were carefully incorporated throughout the interview process of the research. The approach to participant privacy, including the omission of personal questions and obtaining consent for recording, reflects a commitment to ethical research practices. This attention to ethics not only ensures the integrity of the research but also sets a standard for responsible data collection in urban studies.

While the project offers valuable insights, it is important to acknowledge its limitations. The site-specific focus, while adding a new perspective to existing science, may limit the direct transferability of some findings to other contexts. Further studies may build upon this study by evaluating the relevance of the design strategies in other urban environments and cultural situations. This graduation thesis offers substantial academic and societal value through its new methodology for enhancing liveability in heritage areas.

Assesment of the transferability of the project results

The transferability of this graduation project's results is a significant aspect of its overall value, offering potential applications beyond the specific case study. The liveability design strategies developed through this research demonstrate considerable versatility, applicable not only to post-war neighbourhoods and buildings but potentially to structures from other construction periods as well.

The project's approach of testing design strategies on a specific building typology, namely the porch building, provides a valuable template for how these strategies can be adapted and implemented in various contexts and building types. By weighing different options and elaborating on one in the design, the project illustrates a methodical process that can be replicated in other scenarios.

The primary intent of improving liveability and adding value to heritage in post-war neighbourhoods with low neighbour satisfaction is a concept that can be broadly applied. The liveability design strategies resulting from this research can serve as a toolkit, from which strategies can be selected based on building-related issues, effectively creating a project-specific programme of requirements. This adaptability enhances the transferability of the research outcomes to a wide range of projects.

It's important to note that while the strategies themselves are transferable, their specific application will vary depending on factors such as building typology, population composition, and urban context. This variability underscores the need for careful consideration and adaptation when applying these strategies in different settings.

The potential for further research is evident, particularly in testing these strategies across different typologies and urban contexts. This expansion could significantly enhance the robustness and applicability of the strategies, potentially leading to a more comprehensive framework for improving liveability in diverse urban environments. A crucial aspect of the project's transferability is the emphasis on conducting heritage value assessments before applying the design strategies in new contexts. This approach ensures that the unique historical and cultural aspects of each site are respected and incorporated into the design process, maintaining a balance between improvement and preservation.

Finally, the project serves as a valuable reference for approaching and preserving existing architecture of similar typologies based on identified heritage values. This aspect of the research provides insights into how to navigate the complex balance between modernization and preservation in urban renewal projects.

The integration of interview and literature review results

The results of the interviews and literature review converge to form a comprehensive framework for addressing the main research question: "What architectural design strategies can be applied to post-war housing to improve neighbourhood satisfaction by enhancing liveability, while considering the values and attributes perceived by residents?". This integration is effectively visualized through the creation of design strategy cards, which serve as a synthesis of the various elements uncovered in the research process.

The organization of these cards is structured around the four liveability dimensions derived from Leby and Hashim's liveability framework. This approach provides a solid theoretical foundation for the strategies. However, the strength of this method lies in its recognition of the interconnectedness of these dimensions. For instance, the 'Mobility card', while primarily addressing the functional environment, also has implications for the physical environment, demonstrating the multifaceted nature of liveability interventions.

Crucially, these strategies are not developed in isolation from the residents' perspectives. They are intrinsically linked to the valued attributes identified through the Value Framework by Roders, which emerged from the resident interviews. This connection ensures that the proposed strategies are not only theoretically sound but also resonate with the actual needs and values of the community. For example, the 'heritage-

sensitive' card, which focuses on architectural interventions that respect historical design elements, directly corresponds to attributes such as cultural identity, recognition and appearance – values explicitly mentioned by neighbourhood residents.

This approach of linking theoretical liveability dimensions with community-valued attributes creates a robust and context-sensitive set of design strategies. While the strategies themselves are formulated in a general manner, allowing for broader applicability, the attributes tied to each strategy are specific to the case study location of Nieuw-West.

The design strategy cards thus serve as a bridge between academic research and practical application, between theoretical frameworks and residents' values. They offer a tangible tool for architects and urban planners to implement liveability improvements that are both theoretically grounded and responsive to community needs. This integration of diverse research elements – from literature-based liveability dimensions to community-derived value attributes – into a cohesive set of design strategies represents a significant contribution to the field of urban renewal and heritage adaptation.

Assessment of the resourceful theme in the design

The resourceful theme in the design is evident through a thoughtful approach that balances the need for modernization with the preservation of the building's original character and the efficient use of resources.

The design philosophy prioritized minimal interventions in the existing building structure. This approach not only preserves the building's heritage value but also minimizes resource consumption and waste generation associated with extensive renovations. The moderate changes implemented to enhance liveability demonstrate a careful balance between improvement and preservation, maintaining the building's typological value, which is characteristic of the post-war construction period. By presenting this typology in a contemporary appearance while preserving its essential features, the design ensures that typological characteristics remain central to the distinctive architecture. Functional and aesthetic elements are thoughtfully integrated to meet current standards, resulting in a harmonious blend of heritage preservation and modern functionality that respects the building's historical significance.

The application of the 'energy efficient & sustainability' card to address the lack of insulation is a prime example of resourceful design. By weighing different options for façade insulation and selecting an external insulation system, the design improves the building's energy performance without compromising its internal spaces. This intervention enhances comfort, a crucial aspect of liveability, while also reducing long-term energy consumption.

The use of wood for new additions such as the accessibility core, galleries, dormers, and window frames reflects a commitment to sustainable materials. Wood, being a renewable resource with a lower carbon footprint compared to many alternatives, aligns well with the resourceful theme. Moreover, its selection to harmonize with the green courtyard demonstrates a holistic approach to design that considers both sustainability and aesthetics.

The repurposing of existing stairwells into internal stairs for maisonette housing types is a prime example of resourceful thinking. By finding a new function for these spaces rather than demolishing them, the design saves materials and preserves part of the building's original structure. This approach demonstrates creative problem-solving in the face of constraints such as the pitched roof and north-facing orientation.

The development of various dwelling types, each with its own advantages and constraints, offers flexibility in application. This versatility allows for efficient use of space and adaptability to different resident needs, which is a key aspect of resourceful design in housing. The interdependence of some dwelling types (e.g., the starters maisonette and single-type apartment) shows a systemic approach to space utilization.

The design integrates liveability improvements with sustainable practices. For instance, the new accessibility core enhances the building's usability while being constructed from sustainable materials. This integration demonstrates that resourceful design can simultaneously address functional needs and environmental concerns.

08.

Bibliography

This chapter of the bibliography lists the literature sources consulted and referenced in the report.

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