

Exterior Architecture and the Dutch housing crisis

Young adult's perceptions of modern and (neo)traditional architectural developments



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“The making of places we call architecture. Through building man gives meanings concrete presence, and he gathers buildings to visualise and symbolise his form of life as a totality. Thus his everyday lifeworld becomes a meaningful home where he can dwell.”

C. Norberg-Schulz (1979) (Cody & Siravo, 2019, p. 32)



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Young adult's perceptions of modern and (neo)traditional architectural developments in the Netherlands

Master thesis Urban and Economic Geography

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Preface

Before you, lies the thesis: Exterior Architecture in the production of Place Identity – Young adult's perceptions of modern and (neo)traditional architectural developments in the Netherlands. With this thesis I am completing my master's degree in Urban Geography at Utrecht University. This research focuses on the interplay between exterior architecture and people, the basis of which is an extensive theoretical framework and photo elicitation interviews conducted with young adults living in the Netherlands.

During my studies I found great affinity with the relation between the built environment and people. The fascinating dynamics between these entities and the impact they can have on each other, which my friends and family never thought about, was the starting point of this research. I am an architecture enthusiast, other than the technical masterpieces, I am focused on the small detailing and the way architecture can influence my personal well-being. A niche that has not been widely studied, which enhances my interest all the more.

When writing this master thesis, in the period between March and June 2024, it felt sometimes overwhelming. Getting deeply rooted in literature that continues to fascinate you, going to different corners of the country to conduct interviews, and spending hours of writing in the university library. It was a period in which I learned a lot. Such as taking responsibility for making decisions in research, or delving into the method of photo elicitation interviews which I never used before. It was a privilege to learn all these aspects of doing research.

I would like to thank my supervisor Dr. E. Foire for her guidance and support during this process. I would also like to thank all the participants of the photo elicitation interviews. Without them I would not be able to analyse their perceptions of modern and (neo)traditional architecture in the Netherlands. Lastly, I am greatly thankful for the support of friends and family members during my research.

Hopefully you enjoy the reading.

Bas van Horne

Utrecht, 28 June 2024

Summary

The Netherlands is facing a housing crisis, with thousands of dwellings being built in a construction impulse. Producing buildings with a focus on quantity and a lack of aesthetically appealing qualities. Critics foresee a lack of place identity due to the homogenisation of exterior architecture. Young adults are affected by the housing shortage and can contribute with valuable perceptions of exterior architecture. The aim of this research is to draw recommendations for Dutch urban planners and policymakers to leverage from the housing shortage with preferred exterior architecture which fosters the identity of place. The interdisciplinary knowledge in the role of aesthetically appealing exterior architecture fills the academic gap and contributes to the public engagement of contemporary urban developments. This thesis attempts to answer the following question:

How does exterior architecture in the context of the housing crisis in the Netherlands influence the identity of a place, and how do young adults living in the Netherlands perceive the architectural form of new urban developments?

To answer this question, the qualitative method of Photo Elicitation Interviews (PEI) was adopted. Using a total of nine theory driven photographs selected in three categories: traditional, modern, and neotraditional exterior architecture. Fifteen participants aged between 21 and 29 currently living in the Netherlands were interviewed with a semi-structured approach.

The open and axial coding following the thematic analysis resulted in five core themes which show the main findings. A dichotomy between simplistic and homogenous interpreted architecture, and detailed and authentic interpreted architecture became strongly apparent during the analysis. Which shows that interaction between exterior architecture and people was strongly present. Participants had more affinity with (neo)traditional forms of architecture which enriched the place identity and local culture. The small scale, use of warm colour schemes, rich use of ornamentation, and variation between buildings were positively identified elements of (neo)traditional architecture. Modern exterior architecture was negatively perceived due to the large scale, use of cold colour schemes, monotonous and repetitive structures, and the lack of details and ornamentation. Recurring aesthetic elements 'internal symmetry and balance' did not appear during the interviews. Furthermore, Urban memory appeared to play an important role in the production of place identity but can be seen as static regarding the preferences of exterior architecture. Urban memory influences the attachment to a dwelling as well, especially participant's parental homes. As last, the monotonous and homogenous architecture produced during the housing crisis was seen as a temporary solution for the current housing crisis, but not aesthetically wanted or preferred by the participants. This shows the frictions between exterior architecture produced by the housing crisis and how it affects the preferences of participants and their well-being.

These results provide insight into the role exterior architecture can play in the construction impulse, which can be translated into policy recommendations for urban planners, architects, and policymakers. When constructing dwellings by using the neotraditional approach the construction impulse could be beneficial to enhance place identity and to create more aesthetic appealing cityscapes. It is recommended to policymakers and urban planners to broaden their influence on exterior architecture that could make a greater contribution to the city. Especially the use of variation between buildings while forming a cohesive is a key element. Buildings with different colours, detailing, brick patterns, materiality, forms and ornamentation create more unique dwellings. Materiality with brick use and warm colour schemes and a small scale are appreciated aesthetics of participants which could be leveraged from within the construction impulse.

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1. Introduction

1.1 Problem indication

The Netherlands is facing a housing crisis, with currently a housing shortage of over 300,000 dwellings (*Rijksoverheid*, 2023). Politicians, policymakers, and urban planners make an attempt to ‘fight’ this housing crisis with a construction impulse, building thousands of dwellings in the areas with the most prevalent housing shortage (*Rijksoverheid*, 2023). Tensions occurred with these newly built dwellings and its exterior architecture, as argued by Margry (2024): “The glaring housing shortage and, at the same time, the impotence to build quickly is putting enormous pressure on politicians. [...] The complex task of not only getting housing construction off the ground but also monitoring urban planning quality.”¹ Architecture critics argue that the housing crisis results in unilateral architecture, in which the emphasis is on building rapidly, focusing on quantity, with quality for aesthetics coming as secondary or sometimes even tertiary (Houtappels, 2023). Research by Granström & Wahlström (2017, p. 121) shows that housing shortages in Sweden and the scarcity of housing resulted in “easy to sell produced” apartments, “which reduces the incentives for the developers to prioritise the aesthetics” of exterior architecture. As a result of the housing crisis criticism on the lack of aesthetics of architecture rises.

Moreover, global phenomena in exterior architecture have their impact on the produced buildings as well. Privatisation, deregulation, the opening up of national economies to foreign firms, and the growing participation of national economic actors in global markets forced cities to compete for economic prosperities (Sassen, 1991). Sklair (2017) explains this as ‘capitalist globalisation’. The (post)modern architectural discourse became a symbol of global prosperity that underpinned the global economy and flows of capital (Adamczyk, 2015; Grubbauer, 2015). Resulting in the homogenisation of architecture in which buildings look similar globally.

Problems emerging from the homogenisation of architecture due to the housing crisis and capitalist globalisation are two folded. First, it affects place identity. A lack of place identity through buildings leads to tension between (exterior) architecture, global economic forces, and local cultural identity (Castree et al., 2013; Harvey, 1989; Herrle et al., 2008; Sassen, 1991). Norberg-Schulz (1980) argued that this monotonous architecture is disconnected from local rooted culture and produces a “crisis of place” in contemporary urban developments (Wilken, 2013). In this way, the discourse of architects and their produced buildings do not meet the preferences of end-users. Architects design buildings influenced by its discourse, which is mutually maintained by architects (Sklair, 2017). They have a degree of power and a major impact on human well-being and their behaviour without opposition that ensures the interests of end-users (Granström & Wahlström, 2017).

Furthermore, the housing crisis and production of homogeneous architecture affects the well-being of residents. Housing is critical in providing stability, security, sufficient space, and opportunities to create a positive sense of self (Bratt, 2002). As well, homogeneous exterior architecture affects negative relations with a place, can lead to stress, negativity, and feeling anonymous (Mezhenna & Filippova, 2020; Watson, 2019). Another problem related to the housing crisis affects young adults (ageing between 18 and 30) who ‘suffer’ as they are forced to live longer at their parental home. A young adult stated in a protest performance: “I want to live, I want to start, I want space, without roommates, I want something for my own, or to live with my partner”² (Çolak, 2024), which show the currently felt frustrations among this generation. According to *Centraal Bureau voor de Statistiek* [CBS] (2023) the amount of young adults living at their parents’ place increased by 11% in the last twenty years. In 2003, 24,9% of the young adults between the age of 24 and 27 lived at their parental home, in 2023 this was increased to 32,3%. Besides that, young adults are affected by this housing crisis and have to live longer at their parental home (CBS, 2023). This population is about to make crucial decisions that will be life-changing, according to the life cycle approach (Pittie, 2011). Which makes this population group, young adults currently living in the Netherlands, important to research when it comes to exterior architecture of urban housing developments. Especially since they are a target group for investors of urban developments, and are relatively new to the housing market.

¹ Dutch quote by Margry (2024) is translated into English.

² Dutch quote by Çolak (2024) is translated into English.

A worldwide (online) countermovement to raise the issue of homogeneous developments is slowly gaining ground. 'Architecture Uprising'³, 'The Aesthetic City', and 'La Table Ronde de l'Architecture' are endorsing a shift in the architectural discourse. These movements plead for the revival of 'traditional' architecture: neotraditional. The shared sense between these platforms is an observed 'deterioration' of architecture with the appearance of a standardised product. Instead of urban homogenisation, they seek a new architectural discourse for "the well-being of the final user", "to restore the importance of beauty in architectural education", "using principles that have withstood the test of time instead of following currently fashionable trends", and buildings that "respect local inhabitants, traditions, history and adapt to local circumstances" (*Architectuur Omslag*, 2024; *La Table Ronde de L'Architecture*, 2024; *The Aesthetic City*, 2024). This indicates a dissonance between modern contemporary urban developments and the neotraditional buildings.

All in all, the importance of this study is providing knowledge of the role aesthetically appealing exterior architecture can play in the context of the housing crisis in the Netherlands. Offering interdisciplinary insights combining architecture, philosophy of aesthetics, urban planning, and human geography. Which is important to present policy recommendations for architects and urban planners to create buildings that resonate with young adults and foster place identity to leverage from the housing crisis. The preferences of young adults are an addition as they are affected by the housing shortage and soon will enter or just entered the housing market.

1.2 Research questions and aim

To understand the interactions in this interdisciplinary field of interactions between exterior architecture, place identity, and young adults' perceptions, the following main research question is elaborated:

How does exterior architecture in the context of the housing crisis in the Netherlands influence the identity of a place, and how do young adults living in the Netherlands perceive the architectural form of new urban developments?

The first sub-question delves into the general interactions between exterior architecture and people in order to understand how these forces shape place identity. These insights were used to build upon the foundation of this research. The first sub-research question is as follows:

In what way do exterior architecture and people interact to create place identity in the Dutch context?

The second sub-question outlines the characteristics of three architectural forms of urban developments in the Netherlands. Needed to define the architectural categories and how they manifest in the Netherlands. The second sub-research question is as follows:

What are the key characteristics of (neo)traditional and modern architecture in the Dutch context?

Moreover, the third sub-question expands the knowledge regarding the housing crisis related to the preferences of young adults. Important for the understanding of decision-making processes of this target group. Eventually to leverage from these understandings in the production of buildings during the construction impulse. The third sub-research question is as follows:

How does the housing crisis shape the preferences of exterior architecture by young adults living in the Netherlands?

The aim is to draw recommendations for Dutch urban planners and policymakers to leverage from the housing shortage with preferred exterior architecture which fosters the identity of place. The objective is to provide insights in perceptions and preferences about exterior architecture by interviewing young adults who currently live in the Netherlands. The research question was answered through qualitative

³ Used in different regions and countries with different names, the Dutch version is 'Architectuur Omslag'.

research, whereby young adults currently living in the Netherlands were interviewed via theory driven photo elicitation.

1.3 Academic relevance

Academic literature focusing on exterior architecture in the Dutch context is a missing element in the broader debate on preferred architectural forms, homogenisation and the current housing crisis. Granström & Wahlström (2017) studied the impact of the housing crisis on built dwellings and identified the preferred satisfied forms of exterior architecture by laymen and architects. They focused on the Swedish context and took all end-users of these housing projects into account. Furthermore, studies in exterior architecture are reviewed from multiple disciplines: technical architectural (Herrle et al., 2008; Salingaros, 1997), neurological (Sussman & Hollander, 2021), philosophical (Scruton, 2013), and urban design (Lynch, 1996). A study from an urban geography perspective, connecting exterior architecture, housing, and the preferences of a certain population is a less studied field. Other studies were concentrated on the gap between architects and lay people (Nasar, 2017; Sternudd, 2007), again with a focus on other countries than the Netherlands, such as Sweden and the United States. Since traditional architecture is a strong cultural discipline with different manifestations per region, makes comparing studies from other countries in architecture a disparate equation.

Previous studies into (neo)traditional architecture (Krier et al., 2009; Salingaros, 1997), or modern contemporary architecture (Beckers, 2018; Jencks, 2002), were focused on a single architectural form. Using only one way of thinking or perspective in research limits the wider context or nuance. Modern and (neo)traditional forms have not been contrasted within one study. Therefore the end-user's perceptions have not been applied in the contrast of multiple architectural forms. Furthermore, Shannon (2014) did study two forms of architecture, which were compared to formulate generalisations. She showed differences in the way people perceive old and new buildings in the United States. The use of photographs in a survey makes the study by Shannon (2014) closely related to the subjective of this research. However, she focused on generalisations of US residents, while this study was determined on the perceptions of young adults in the Netherlands. Moreover, this study delves further into exterior architecture, not only concentrated on years of construction as Shannon (2014) did.

Most literature on housing within the Dutch context neglects the importance of exterior architecture. These studies focused on the housing supply (Boelhouwer, 2020), social housing (Elsinga & Wassenberg, 2014), or the housing crisis (Lucassen, 2020). Exterior architecture is not a commonly researched subject in human geography. On the other hand, previous studies within the discipline of architecture are more aligned with this topic. Robinson (2015) did research architecture in the Netherlands. He focused on densification developments with some fragments about exterior architecture, but without the perceptions of end-users or other populations. Studies by architects, such as Robinson (2015), have a different approach than studies with a human geography background. Instead of reviewing the constructional elements, as the architectural approach, the connection between (exterior) architecture and the experience of people is missing. This research aims to provide a bridge between these two elements, exterior architecture and the perceptions of young adults.

Thus, this research fills the knowledge gap in exterior architecture within the Dutch context, emphasising the need for localised research. The interdisciplinary nature of this research addresses the gap in literature that overlooks the perceptions of end-users, specifically young adults, in architectural studies. Important for understanding laymen's preferences to bridge the gap between professional architects and the general public in the Dutch context.

1.4 Societal relevance

By identifying preferences in exterior architecture, this research supports policy recommendations on forms of building that foster place identity. Public authorities, policymakers, architects, and urban planners could use these recommendations to leverage from the housing crisis by implementing more preferred aesthetics on exterior architecture, based on the perceptions of interviewed young adults. With the current construction impulse, these recommendations could create a coherent place identity. Dutch cities will change rapidly with inner-city (re)developments, this increases the need for adjusting the role of exterior architecture (Hamers, 2020; Verbruggen, 2019). Schönberger (2024) and Margry (2024) argue that a societal debate, with more critical notes on these developments and its quality of

exterior architecture, is needed. They see too little criticism of the rapid developments produced by the housing shortage. By engaging the public, their perceptions contribute to more valuable insights and can help raise awareness about the importance of exterior architecture. This research provides relevant input from an academic perspective for the ongoing societal debates.

Societal relevance emerges in the collective debate around modern urban developments, for example the construction of Heinekenhoek at Leidseplein in Amsterdam (see figure 1.1). One of the aforementioned countermovements, *Architectuur Omslag*, organised a competition for a new design. This modern development is surrounded by traditional buildings, which has a negative effect on the experience of this historical city square and deteriorates the beauty of its surroundings, according to *Architectuur Omslag* (2024). The competition resulted in multiple designs in neotraditional style. This discussion does not emerge at every modern development, but it is present in a certain sense. Especially in inner-city developments when new buildings are contrasting the identity of a neighbourhood or the city as a whole (Schönberger, 2024). Another example is the development of the Sluisbuurt in Amsterdam. In the first released plans multiple residential towers with a height of over 80 meters were proposed. Opponents of the municipal plan came up with an alternative with an equal number of dwellings, but without resorting to high-rise buildings (Koops, 2018). The original plans would not fit with Amsterdam's identity, according to the opponents. They referenced to a lack of character and argued that this development could be in any city with a waterfront, "copy-paste Toronto" (*Het Parool*, 2018). These developments show the intense debate around new residential buildings, and especially its exterior architecture.

The societal relevance of this research is underscored by the ongoing debates and tangible impacts of exterior architectural choices on urban identity. By providing recommendations on the preferences of interviewed young adults, this study aims to inform more thoughtful urban planning practices. As Dutch cities continue to evolve rapidly, particularly with the pressures of the housing crisis. The insights from this research highlight the need for a balanced approach that is of added value with the experiences and preferences of young adults.



Figure 1.1 Modern development at Leidseplein in Amsterdam and its winning alternative design (Architectuur Omslag, 2024).

1.5 Thesis outline

In the following chapter, the theoretical interplay between place (exterior architecture) and people, that shape place identity, is discussed. The theoretical framework combines multiple theories and concepts based on academic literature. The influence of exterior architecture, place identity, the philosophy of aesthetics are described within this theoretical framework, provided with the traditionalists and modernists approach. Chapter 3 discusses the applied qualitative method of photo elicitation interviews. Chapter 4 presents the results, structured in five themes. These results were interpreted in chapter 5, accompanied with the limitations of this research and recommendations for policymakers and urban planners. Finally, chapter 6 provides a conclusion to this thesis.

2. Theoretical framework

In this theoretical framework the concepts of place identity, (distinctive) place character, aesthetics in architecture, the traditional architectural approach and the modernist architectural approach are described in depth.

2.1 Place identity and its multi-layered conceptual complexity

The term 'place' is a central concept in human geography, but since the 1970s with a set of meanings and attachments which have broadened the interpretation (Cresswell, 2009; Hauge, 2007). There was a surge in interest in studying people's relationships to and perceptions of places, which resulted in this broadened concept (Ali et al., 2022). According to Cresswell (2009), place is a meaningful site that combines location, locale, and sense of place. Location refers to an absolute point in space with a specific set of coordinates. Locale refers to the material setting for social relations, including buildings, streets, and other visible and tangible aspects of a place. Sense of place refers to the meanings associated with a place, the feelings and emotions a place evokes for example. These meanings can be individual and personal based, or shared through films, literature, advertising, and other forms. Other scholars, such as Tuan (1977), emphasise that places are not merely physical locations but are imbued with subjective meanings and experiences. He argues that our perception and experience of place are shaped by our senses, emotions, memories, and cultural backgrounds. Furthermore, Cresswell (2009) explains that any given place consists of materiality, meaning, and practice. These elements are all linked: "the material topography of place is made by people doing things according to the meanings they might wish a place to evoke" (Cresswell, 2009, p. 2). It is the distinction between an abstract realm of space and an experienced and felt world of place. Montgomery (1998) explains this slightly different as the form (tangible elements), activity (people using the space), and image (individual and collective perceptions of space) that produces a place, visible in figure 2.1. In other words, places have their distinctive and individual identity. Place identity encompasses the unique characteristics, meanings, and values associated with a specific location, shaped by human interactions, cultural influences, and physical elements (Ali et al., 2022).

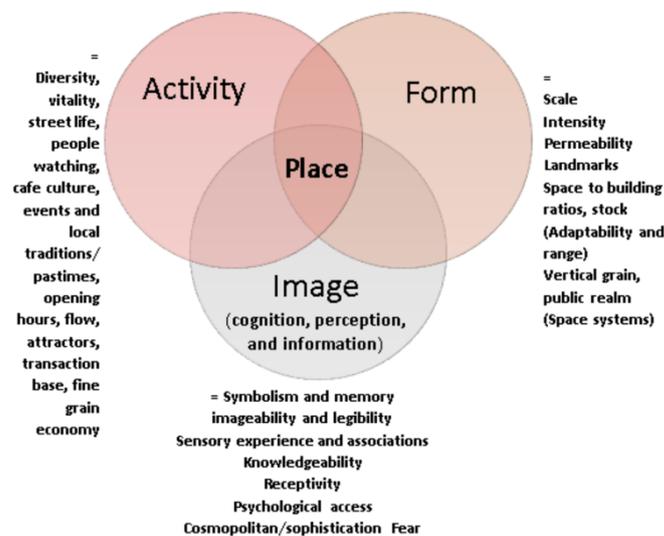


Figure 2.1 The three essential elements of the identity of place (Montgomery, 1998).

Thus, place draws heavily on phenomenology, the study of people and the world that highlights the active and varied ways in which sense-making occurs (Husserl & Carr, 1970; Norberg-Schulz, 1971, 1980, 1988). Norberg-Schulz emphasizes the importance of subjective, embodied experiences of space in shaping our understanding of the world and ourselves. Places have their own unique identities, shaped by a combination of physical, cultural, and symbolic attributes, described as 'place identity' (Proshansky, 1978). Proshansky (1978, p. 155) defined place identity as: "those dimensions of self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, feelings, values, goals, preferences, skills, and behavioural tendencies relevant to a specific environment". This place identity can be seen as

rooted and resistant to change, such as Heidegger's concept of place as a primordial ground of being (Dovey, 2010). Dovey (2010) understands place identity as provisional and unfixed, shaped by diverse interactions and connections rather than predetermined essences. Massey (1994, p. 65) points this out: "it is absolutely not a seamless, coherent identity, a single sense of place which everyone shares [...] If it is now recognized that people have multiple identities, then the same point can be made in relation to places." Many other scholars contributed to the theory of place identity (Hauge, 2007; Relph, 1976; Tuan, 1977), but Paasi (2001, 2003) distinguished place identity into two aspects: place identity of a place, and people's place identity.

The people's place identity focuses on the importance of places influencing the individuals' identities (Hauge, 2007; Proshansky, 1978). It is often referred to as a term to describe a subjective feeling of identification with a neighbourhood, home or other space (White et al., 2008). Terms as 'place attachment', 'place dependence', 'sense of place', 'genius loci' (spirit of the place) do overlap with people's place identity, commonly they all define emotional bonds to places (Cresswell, 2009; Ley, 1995; Lynch, 1996; Tuan, 1977). Places contain of many different personal meanings and different levels of identity, but Dixon & Durrheim (2000) suggested a genuinely social understanding of place identity by showing how places might become significant and contested arenas of collective being and belonging.

On the other hand, the place identity of a place is constructed as differences between places which are attributed or perceived by people, to some extent a subjective social construct based on objective physical settings (Peng et al., 2020). Paasi (2001, 2003) argued that features of culture, nature, and people make places unique from other places, in order to distinguish a region from others. Howard (2016) defined place identity of a place as a combination of physical and man-made processes, meanings, and structures in places. All in all, anything that makes a place identifiable within the spatial system shapes the place identity of a place. This identity is not only based on material elements, but also formed by subjective images and objective classifications (Paasi, 2003). Furthermore, the elements that form the place identity of a place can be generally clustered into three groups: (1) physical shape (landscape, buildings), (2) symbolic shape (landmark, dialect), and (3) institutional shape (government, neighbourhood) (Peng et al., 2020).

Both people's place identity and place identity of a place overlap, but are not similar as both concepts embody personal or emotional links between the physical world and humans (Ali et al., 2022). "People's place identity is part of individuals' personalities related to places that are significant in the formation of their identities. Place identity of a place is the personality of the place. Such personality is, on most occasions, ascribed by people to the place where they live or that they care about" (Peng et al., 2020, p. 14). This is visible in figure 2.2. The interaction between place and people constitutes people's collective and individual identity. Meanwhile, people perceive and construct the identity of a place. The physical, symbolic, institutional, and other elements of a place shape its identity, even though people's consciousness — which is primarily produced by the human neurological system — reflects the identity of a place (Raagmaa, 2002). Both internal growth (e.g. promotion or regional development) or external forces (e.g. globalisation, spatial planning) would impact the place identity of a place and people's place identity, as the interaction between people and place is dynamic and mutual (Ramos et al., 2016).

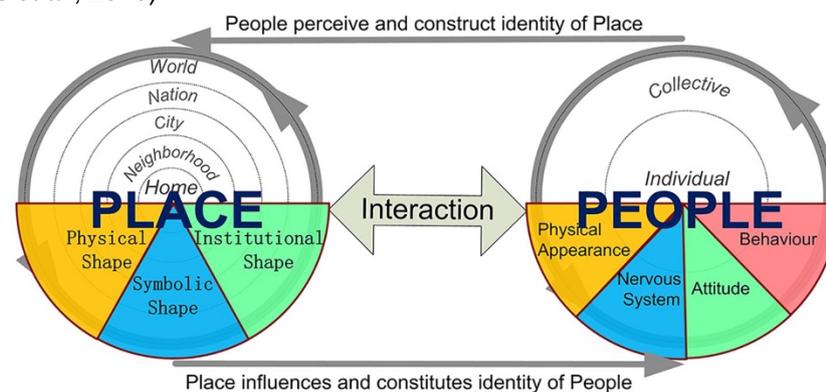


Figure 2.2 Relationships between people, place, and place identity (Peng et al., 2020).

Other terms related to the identity of place and its placeness, is the negatively interpreted counterpart 'placelessness'. The loss of distinctiveness and identity in the built environment, resulting in spaces that lack meaningful connections to people and communities (Relph, 1976). Relph argues that placelessness occurs when the built environment becomes standardised, homogeneous, and disconnected from its cultural, historical, and ecological context. Augé (1996) explains this as 'non-place' as a location without a sufficiently unique and meaningful appearance to consider it as a 'place'. These concepts will furtherly be explained in critique on modernism.

The complexity of place identity as a concept evokes multiple dimensions and is still being debated by scholars today. The subjective, vague, heterogeneous interpreted, and difficult to measure 'placeness' and its identity lead to criticism, but people, place, and the interaction between them should be taken as the main components of the identity of the place (Ali et al., 2022). In this research the following definition for place identity will be used to prevent misunderstandings, based on the literature reviews by Ali et al. (2022) and Peng et al. (2020): the people's personal and collective perceived and constructed identity of a place with (in)tangible characteristics, meanings, and values, which makes a place distinctive and unique from other places.

2.2 Distinctive place character with architecture

People play a major role in shaping a place and its identity, but what is the role of buildings and its exterior architecture in producing these identities? And what makes these identities distinct from other places? Figure 2.2 shows that the physical shape is crucial in producing place. Or as Winston Churchill explained it: "We shape our buildings and afterwards our buildings shape us" (Gieryn, 2002). Built places and buildings are an integral key element to structuration and reproduction of place (Pred, 1984). The public realm is a field with interactions between material constitution and structuration of social life, which is produced and reproduced by human actors (Goss, 1988). The buildings, and its exterior architecture, are not seen as static entities but are constantly subject to reinterpretation, narration, and representation, which influences the meanings and stories associated with a place (Gieryn, 2002). Giddens & Gregory (1984) and Bourdieu (1999) describe this as an entity between agency and structure. Buildings are not merely passive structures but actively shape human actions, intentions, and interpretations (agency). At the same time, buildings also reflect and embody social norms, cultural values, and power dynamics (structure). This is in line with sociologist and philosopher Latour who is known for his actor-network theory (ANT). This framework sees social phenomena as the outcome of interactions between both human and non-human actors (Yaneva, 2022). Buildings and physical environments, or other non-human actors, have agency in shaping human behaviour and mediating social interactions. This 'translation' by which actors, both human and non-human, negotiate their interests and form alliances within networks. In other words, "the structuring capacity of a house does not lie in the arrangement of physical properties such as doors, walls and windows; a 'house' is grasped as such only if the observer recognises that it is a 'dwelling' with a range of other properties specified by the modes of its utilisation in human activity" (Gieryn, 2002).

Thus, buildings have an active role by influencing and shaping human actions and behaviours, but to what extent do buildings and architecture shape the distinctiveness of a place? Scholars reference 'place character' to understand how locales vary, and how these variations influence attraction to a place and action within it (Paulsen, 2004). Place character refers to the objective and tangible qualities of a location that contribute to its distinctiveness and identity (Buttimer & Seamon, 2015; Hayden, 1995). It encompasses physical geography (nature/climate), history (historical events/context), economy (industries/activities), demographics (population/diversity), politics (policies/governance), organisations (institutions/communities), culture (traditions/arts), and aesthetics (architecture/urban design) which are essential elements that constitutes a place's character (Buttimer & Seamon, 2015; Hayden, 1995; Jackson, 1995; Lippard, 1997; Paulsen, 2004). These elements, when combined and interacting with one another, create the multifaceted character of a place, defining its identity, values, and distinctive qualities. The physical elements that create the character of a place are mainly found in the historical context, symbolism, and aesthetics.

1. Historical context: buildings shape the urban character by preserving urban nodes and its historical and familiar scenes (Al-Hinkawi et al., 2021). Facades help maintain a sense of continuity with the past and adds to the cultural richness of a community (Paulsen, 2004). It is part of the collective memory people have of a place which gives its identity a characteristic uniqueness (W. Al-Hinkawi & Al-Saadawi, 2019; Highfield, 1991).

2. Symbolism: architecture and buildings serve as symbols of a community's identity, values, and history. The design, style, and aesthetics of buildings contribute to the overall character of a place and help establish a sense of identity (Paulsen, 2004). This strengthens societies by fostering deeper attachment to place and higher levels of social cohesion (Hurley, 2010).
3. Aesthetics: the physical elements of a place, including architecture, landscaping, and urban design, play a crucial role in creating a unique atmosphere and visual appeal (Paulsen, 2004). "Architectural inventories and assessments of continuity among architectural styles can provide indicators of the level of local investment in aesthetics and the meanings that particular aesthetic decisions reflect" (Paulsen, 2004, p. 252).

When it comes to place character perceptual memories are essential to produce distinctive places, for both personal individual and collective perceptions (Halbwachs & Coser, 1992; Hebbert, 2005; Rossi, 1983; Sargin, 2004). This 'urban memory' is "embodied in bricks [...] and carved out in air and space" (Worpole & Greenhalgh, 1999, p. 30). In other words, human memory is spatial, architecture and other physical elements are a locus of collective memory (Hebbert, 2005). "It can express group identity from above, through architectural order, monuments and symbols, commemorative sites, street names, civic spaces, and historic conservation; and it can express the accumulation of memories from below, through the physical and associative traces left by interweaving patterns of everyday life" (Hebbert, 2005, p. 592). Architecture can be considered as more than simply buildings, rather the mapping of physical, mental or emotional space (Hornstein, 2016). "We may live without [architecture], and worship without her, but we cannot remember without her. We remember best when we experience an event in a place" (Hornstein, 2016). Memories are not only crucial for collective urban identity. Perceptual memories mediates the experiencing of urban built environments by recalling how this place was different in the past (Degen & Rose, 2012). The sensorial body is central to the design of urban built environments, because the senses are part of people's everyday experiencing and interaction with the sensual material life of objects (Degen & Rose, 2012; Highmore, 2009; Kalekin-Fishman & Low, 2010; Mason & Davies, 2009). For example, the city of Venice in Italy with its winding canals, historic palaces, and bustling piazzas evokes a shared sense of place identity among residents and visitors. The tactile experience of navigating narrow alleyways, the visual spectacle of ornate architecture reflected in the shimmering waters, and the auditory ambiance of gondoliers singing and church bells ringing all contribute to a collective memory and embodied experience of Venetian identity (D. Howard et al., 2002). On the other hand, Degen & Rose (2012), provided an example of someone's personal perceptual memory that's creating place character: as someone strolled through the cobblestone streets of Edinburgh's Old Town, the scent of heather in the air and the sound of bagpipes echoing off ancient stone walls transported her back to a childhood visit to her Scottish grandmother's home, instilling in her a deep sense of connection to the city's rich cultural heritage and her own familial roots. All these embodied sensorial experiences shape the identity of a place, collectively and personally, in which the physical elements are crucial.

In conclusion, non-human actors constitute distinctiveness to a place, produced and reproduced by embodied perceptual memories and collective urban memory (Degen & Rose, 2012; Goss, 1988; Yaneva, 2022). The character of a place is complex with multiple individual perceptions. The physical geography, history, economy, demographics, politics, organisations, culture, and aesthetics constitute a collective place character, which creates distinctiveness (Buttimer & Seamon, 2015; Hayden, 1995; Jackson, 1995; Lippard, 1997; Paulsen, 2004). In this research there will be a focus on the collective urban character, shaped by individual perceptions and memories, which makes places distinct and unique. Especially the influence of architectural styles by fostering this distinction from other places.

2.3 Aesthetics in architecture

Architecture, and predominantly the exterior part or facades, are often the target of personal opinions and perceptions in the public realm. The aesthetics of architecture are both subjective and objective as a spectrum of individual preferences, cultural influences, and design principles (Ching, 2023). "Urban environments are more and more often designed in order to be distinctive, vibrant and beautiful, thus creating — or so the argument goes — memorable sensory experiences for the people who pass through them" (Degen & Rose, 2012, p. 3282). But who decides what is beautiful? And are there any generalities or shared conventions when it comes to aesthetics in architecture?

Already in the roman empire Vitruvius (15 B.C.) defined architecture by using three criteria/phenomena: *venustas* (beauty), *utilitas* (utility/convenience), and *firmitas* (firmness/durability) (Salama, 2007; Uzunoglu, 2012). These criteria for architecture were reinterpreted as: form, function, and construction, see figure 2.3 (Uzunoglu, 2012). Form exemplifies the aesthetic component of architecture, and this is based on the very fact that architecture seeks to express ideal concepts of beauty that emerge from symbols embedded in a particular culture. Function expresses the functional aspects of architecture, or simply the dialectic relationships between people and their environments. Construction on the other hand represents the technological aspects of architecture, since it is governed by the natural sciences, including the laws of physics, statics, and dynamics.

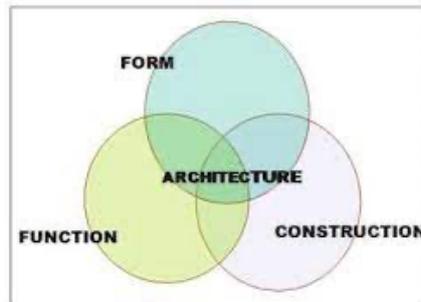


Figure 2.3 The reinterpreted aspects of architecture, originally found by Vitruvius (Uzunoglu, 2012).

Thus, the form of an architectural building is of great importance for the building and its expression. The form can be seen as part of the philosophy of aesthetics. This is the branch of philosophy that deals with the principles of beauty and artistic taste (*Cambridge Dictionary*, n.d.). Beauty, in the context of architecture, is subjective and can be influenced by a range of factors including personal preferences, cultural norms, historical context, and societal values (Scruton, 2013). Beauty and aesthetics can be considered as vague, subjective and accompanied with theoretical difficulties in defining them, “but when it comes to particular cases we find a considerable amount of agreement” (Munro, 1966, p. 87). The aesthetics of architecture are studied by scholars from multiple disciplines: technical architectural (Herrle et al., 2008; Salingaros, 1997), neurological (Sussman & Hollander, 2021), philosophical (Scruton, 2013), and urban design (Lynch, 1996). All using different methods which resulted in a broad range of outcomes and theories, but there are recurring aspects of aesthetics within exterior architecture with positive perceived values. Recurring elements are: composition and proportion, materiality, symmetry and balance, integration in surroundings, colour, unity and coherence, and level of details.

First, the composition and proportion of buildings. The arrangement of elements within a space, its proportion, and the relationship between these elements are crucial in the design of a building (Ching, 2023). From the golden ratio to more contemporary design principles, architects utilise mathematical proportions and compositional strategies to create harmonious and visually pleasing structures (Ching, 2023). Furthermore, the proportion and the scale of buildings influences its aesthetic impact and spatial experience (Baker, 2009). Well-calibrated scale, or ‘human-scaled’ architecture, ensures that a building feels appropriately situated within its context, fostering visual harmony (Cruz et al., 2009).

Moreover, the materiality of buildings. The choice of materials in architecture influences both the physical durability and aesthetic expression of a building. Materials evoke tactile sensations and imbue spaces with character and identity (Pallasmaa, 2007). Picon (2019) argues that materiality is about the way we experience the tangible reality that surrounds us, and about our understanding of ourselves as subjects of this experience. “The spatial resources of the discipline are usually mobilized in close connection with some key qualities of the materials it employs, from brick to concrete, and from wood to steel. Smoothness or roughness, grain, texture, and colour constitute an integral part of architectural effects” (Picon, 2019, p. 282). For instance, the use of local stone in traditional Japanese architecture not only reflects cultural values but also establishes a strong connection between the building and its natural surroundings (Buntrock, 2010).

Furthermore, the symmetry and balance of buildings. Symmetry, the mirroring of elements across a central axis, and balance, the equilibrium of visual forces within a composition, contribute to a sense of order and stability in architecture (Ching, 2023). While symmetrical designs convey a sense of formal elegance, asymmetry can introduce dynamism and visual interest (Alexander, 1979). Salingaros (2020, p. 231) argues: "Human perception relies upon combined symmetries to reduce information overload but random (disorganised) information is too much for us to process. Our brain automatically compares and groups architectural elements into a larger whole. We unconsciously analyse and process the information in any composition using mathematical relations that endow meaning to our environment."

Additionally, the building's integration in surroundings. Aesthetic excellence in architecture extends beyond individual buildings to encompass their relationship with the surrounding context (Bachman, 2003). Whether nestled within a historic neighbourhood or set against a natural landscape, buildings should respond sensitively to their context, enhancing the visual cohesion of the built environment (Gehl, 2010). This 'contextualism' emphasises compatibility with respect to scale, height, setback, materials, and detailing with surrounding buildings, which is perceived as more aesthetically appealing according to Stamps (2000). This research confirms that people prefer contextual design, especially when related to matching for scale and character (through matching materials or details) with adjacent housing (Levi, 2005).

As well, the colour use of buildings. Colour serves as a potent tool in architectural expression, evoking a positively or negatively felt mood by the public (Minah, 2008). The strategic use of colour at buildings highlights architectural features and contributes to the overall aesthetic quality of a building (Massari et al., 2010). Salingaros (1997) found a thermodynamic analogy to estimate qualities of a building. When it comes to colouring, he argues that a richly coloured building satisfies people's well-being more than a grey building. Research found that people felt more positive perceived emotions and an "increased feeling of life" when buildings had contrasting colour hues or a great variety of colours (Alexander, 1979; Salingaros, 1997). The researchers argue that colour use gives more quality to a building.

In addition, the internal unity and coherence of buildings. This refers to the way different elements of a building (e.g. windows, ornaments, columns, plinths) work together to create a cohesive whole, clarity and legibility in aesthetic forms (Ching, 2023). Together, they ensure that every aspect of a building, from its structure to its ornamentation, contributes to a unified aesthetic vision (Krier et al., 2009). When all elements of a building are integrated and form a unity, it is more positively perceived by the public (Lawrence & Low, 1990).

Lastly, the level of details in buildings. The richness of architectural detailing, from ornate embellishments to minimalist simplicity, contributes to the overall aesthetic quality of a structure (Sağlam, 2014). The detailed craftsmanship in ornamentation enriches the experience by perceivers (Kostof, 1995). This form of decoration makes a building unique, according to Ashraf & Sinha (2023). Its distinctive appearance, which is recognisable to the public, gives a building and the place more character.

The aesthetic preferences of architects differ from preferences by laymen. Research by Sternudd (2007) shows that architects prefer: large-scale buildings, uniformed, few details, cold colours, contemporary style, and original. While laymen prefer mostly the opposite: small-scale buildings, many details, warm colours, historical style, and conventional. Sternudd (2007) and Salingaros (2017) claim that the architectural discourse is focused on a modernists approach, which result in education focused on a particular architectural taste. Architects generally prefer historic buildings, but operate in a discourse which is associated with authenticity, where architects find that buildings with a classical idiom are not authentic if they are built in the modern age (Nasar, 2017; Olssen, 2020). Authenticity is an important factor for architects, something that is unique, original or new, instead of commonplace, conventional or ordinary (Olssen, 2020; Sternudd, 2007). Laymen generally do not seem to put much weight in the importance of a building's authenticity (Granström & Wahlström, 2017; Olssen, 2020). Aesthetics in architecture is an interplay between architects who shape the aesthetic qualities of buildings through their designs, material choices, and spatial arrangements (Ching, 2023). Additionally, property developers and dwellers influence aesthetics based on their preferences and requirements (De Botton, 2008). More generally, the aforementioned cultural norms, societal trends,

and historical contexts influence the aesthetics of architecture (Scruton, 2013). The preference gap between architects/planners and laymen/users is noticeable when it comes to aesthetics in architecture, because of the subjective and fragile interpretation of beauty a gap between knowledge and context easily occurs.

The aesthetics of architecture, also referred as *venustas* or form, are of great importance for buildings and human behaviour (Salama, 2007; Scruton, 2013; Uzunoglu, 2012). This philosophy can be vague, subjective and accompanied with theoretical difficulties, but the seven shared conventions (composition and proportion, materiality, symmetry and balance, integration in surroundings, colour schemes, internal unity and coherence, and level of details) are useful criteria to understand aesthetics in architecture (Ching, 2023; Gehl, 2010; Krier et al., 2009; Minah, 2008; Picon, 2019; Sağlam, 2014; Salingaros, 2020). These elements will be used in this research to describe and define aesthetics of buildings. The preference gap between architects/planners and laymen/users reflect difficulties within the discourse of architecture (Sternudd, 2007).

2.4 Traditionalists approach

Traditional architecture is a diverse concept of designs and building techniques. “In its most basic sense, ‘tradition’ also means something that is transmitted”, handing down information, customs, and beliefs from generations to generations (Sushama & Sheeba, 2017). Mostly referred as architectural styles, techniques, and practices that are rooted in local cultural traditions, historical precedents, and vernacular building methods (Oliver, 1998; Rapoport, 1990). It often reflects the unique environmental, social, and cultural contexts of a particular region or community, embodying their values, beliefs, and way of life (Oliver, 1998; Rapoport, 1990). Traditional principles are associated with the culture of the community in a place that is identical to a region or ethnicity (Hamka & Sri Winarni, 2021). Traditional architecture is closely related to vernacular architecture, which refers to the architecture of ordinary, everyday buildings constructed by local communities using locally available materials and techniques responding to the needs and lifestyles of the inhabitants (Cromley, 2008; Oliver, 1998; Oluwagbemiga & Modi, 2014; Şerefhanoglu Sözen & Gedik, 2007). These vernacular buildings are, according to Oliver (1998), mostly constructed as traditional, pre-industrial, handmade structures, tied to a specific time and place. This type of traditional building has indigenous values and promotes attention to the authentic cultural meanings found in a region’s buildings (Cromley, 2008). The traditionalists approach focuses more on preserving and reviving historical architectural styles, techniques, and motifs, often emphasising craftsmanship, historical accuracy, and cultural continuity. Compared to vernacular buildings, this is not predominantly defined as handmade and indigenous. Even though the cultural meaning, the attachment to its local identity and shaping place character through architecture is a shared convention.

Proponents of traditional architecture describe their argumentation as a countermovement, predominantly against (post)modernism. Traditionalists reflect on ‘capitalists globalisation’ and the buildings produced by this process, which are more oriented on cross-border competition than added value and implantation in the local environment (Herrle et al., 2008; Sassen, 1991; Sklair, 2005). “As cities race to the top, constructing the glorious architectural edifices that stand symbolically to a city’s global stature has been accompanied by the rise in a global market of ‘off-the-shelf’ solutions of one-size-fits-all buildings, models, and expert knowledges” (Adamczyk, 2015, p. 2). Traditionalists argue that this globalisation, homogenisation and focus on economic prosperities lead to the loss of unique (place) identities and their distinct cultural meanings (Herrle et al., 2008). The preservation of traditional and historical buildings is important to ensure the distinctive character of a place, according to Tyler (2000). Preservation is not the only element traditionalists advocate for, contemporary urban developments with aesthetics from traditional buildings reinforce this ideology in the same way (Sushama & Sheeba, 2017). These ‘neotraditional’ developments create a strong community identity and encourage place attachment, similar to historic districts (Hamer, 2000; Kim, 2000; Levi, 2005).

Traditionalist Roger Scruton (2013), conservative philosopher, emphasis on preserving traditional values and aesthetics in the face of what he perceives as the erosion of cultural heritage in modern society. Scruton believes that traditional aesthetics, rooted in classical principles of beauty and craftsmanship, offer a timeless and universal standard for evaluating art and architecture. He believes that by embracing a renewed appreciation for beauty, order, and tradition, society can cultivate a deeper sense of connection to its cultural heritage and create works of art and architecture that inspire

and uplift the human spirit. In “The Aesthetics of Architecture” (2013) Scruton argues multiple principles for a new architectural reform. (1) Well-proportioned buildings evoke a sense of balance and beauty, drawing on classical principles of symmetry and order. (2) Moreover, Scruton acknowledges the importance of functionality in architecture, but functional considerations should not override aesthetic principles. (3) Scruton criticises large-scale impersonal structures that fail to engage with the human experience of architecture, therefore he emphasises the importance of designing buildings at a human scale. (4) Furthermore, he advocates for designs that harmonise with their surroundings, complementing the existing landscape or architectural heritage. Furthermore, theorist Krier (1998), and his other work about traditional architecture (Krier et al., 2009), is characterised by a strong emphasis on traditional architectural forms. He argues that the proportions, symmetry, and ornamentation of classical buildings create a sense of harmony and elegance that transcends cultural and historical boundaries by a sense of timelessness and enduring beauty. Krier believes that classical buildings create environments that are comfortable, accessible, and conducive to social interaction, fostering a sense of community and belonging. The cultural continuity, rooted in a rich tradition of architectural forms and techniques that have been passed down through generations, creates buildings that resonate with people’s collective memory and cultural identity. Finally, Classical architecture is highly responsive to its context, with buildings that are designed to harmonise with their surroundings and reflect the cultural and historical context of their location. This enhances the identity and character of a place with a coherent built environment. Thus, his reasoning for a revival of traditional architecture and urban planning are based on the assumptions that: (1) traditional aesthetics are timeless, (2) human scale fosters a sense of community, (3) cultural continuity resonates with collective memories, and (4) the harmonising contextuality enhances place identity and character. Scruton and Krier are researchers who are often referred to when it comes to the revival of traditional architecture. Their substantiation essentially forms the basis of the traditional approach.

But how does this traditional approach look like, and are there any criteria? Traditionalist Krier designed the extension of the English town of Dorchester called Poundbury. In this neotraditional town with several architectural styles based on a local traditional palette, is the traditional ideology tangible, shown in figure 2.4 (Alamy, 2022). Research by Thompson-Fawcett (2003) found a positive agreement by respondents when it comes to the quality of the urban design and architecture, the neighbourhood identity, and the compact urban character of Poundbury. 52% of the respondents strongly agreed that the goal of producing a high quality of urban design and architecture has been achieved. Similarly, 55% ‘strongly agreeing’ and 29% ‘agreeing’ on whether a unique neighbourhood identity has been accomplished. Other descriptions of Poundbury were: “architecturally healthy”, “a modern estate exploiting technical advances and traditional design”. Eventually, 19% of respondents chose to describe Poundbury as “unique”, “distinctive” or “novel”, and 15% described it as “attractive”, “pretty” or “pleasant to the eye”. Although, the respondents were less positive about transit, energy, and mixed-activity goals. Poundbury functions as a counter-project as a retort to contemporary conventional development, in particular defying modernism, homogeneity and the arrogance of private and public speculation, according to Krier & Culot (1980) and Thompson-Fawcett (2003). The design of Poundbury did not follow criteria for traditional architecture, but the seven recurring elements of aesthetics in architecture shape the traditional approach. As traditional architecture follows local traditions and techniques every region has different styles, although the following generalisations are recognisable for (neo)traditional architecture (Ching, 2023; Gehl, 2010; Halauniova, 2022; Olssen, 2020; Pallasmaa, 2007; Salingeros, 1997; Sanoff, 1991):

1. Composition and proportion of buildings: harmonious and balanced proportions with a human-scale.
2. Materiality of buildings: use of local elements such as stone, wood, and bricks.
3. Symmetry and balance of buildings: distribution of visual weight within a composition.
4. Buildings integration in surroundings: harmoniously blend with existing local cultural context.
5. Colour use of buildings: warm colour schemes coherent with context.
6. Internal unity and coherence of buildings: all elements work together seamlessly to form a cohesive whole.
7. Level of details in buildings: high level of details with the use of ornamentation.



Figure 2.4 Neotraditional town of Poundbury (Alamy, 2022).

Critics of a traditionalists approach in architecture mainly form their critique based on innovation, cultural diversity, and the appreciation of historic architecture. Lefaivre & Tzonis (2003) and Slater (1984) argue that traditionalists romanticise or idealise architecture of the past and that they limit opportunities for experimentation and adaptation to contemporary challenges and contexts. Moreover, Galle (2020) is critical about the comprehensive system of traditionalists for architectural design may oversimplify the complexities of architectural practice. Papastergiadis (2005) emphasises the importance of understanding architecture as a reflection of social and cultural dynamics. In this view Papastergiadis criticises traditional approaches which often prioritises fixed notions of style, form, and heritage and its lack of cultural diversity, hybridity, and dynamism. Research by Huxtable (1997), Sorkin (1992) and Tyler (2000) found specific criticism on contemporary traditional architecture. They argue that neotraditional debases our appreciation of both real historic architecture and modern architecture. In the view of historians, forcing copies of historical architecture is against the idea that history should be about reality.

In conclusion, traditional architecture reveals a multifaceted concept deeply rooted in cultural traditions, historical precedents, and vernacular building practices. Traditional architecture encompasses a diverse range of styles, techniques, and motifs that reflect the unique environmental, social, and cultural contexts of different regions and communities (Oliver, 1998; Rapoport, 1990). Proponents of traditional architecture, such as Scruton (2013) and Krier et al. (2009), advocate for the preservation and revival of historical architectural styles and techniques as a countermovement against the perceived homogenisation and globalisation of contemporary architecture. They emphasise the importance of traditional aesthetics, craftsmanship, and cultural continuity in creating buildings that resonate with people's collective memory and cultural identity. Poundbury, designed by Krier, serves as a tangible example of this traditional approach, with its neotraditional design principles aimed at fostering community identity and attachment (Alamy, 2022; Thompson-Fawcett, 2003). However, critics argue that the traditionalist approach in architecture may romanticise the past and limit opportunities for experimentation and adaptation to contemporary challenges and contexts (Lefaivre & Tzonis, 2003; Slater, 1984). They emphasise the importance of understanding architecture as a reflection of social and cultural dynamics, advocating for a more inclusive and diverse approach that embraces hybridity and innovation (Papastergiadis, 2005).

2.5 Modernists approach

The modernist approach, which originates in the 20th century, is an interdisciplinary movement that self-consciously sought to break with tradition (Castree et al., 2013). The poet Ezra Pound summarised the movement's ethos as "make it new!". Key concepts of modernist architecture are functionalism, 'form follows function', simplified forms, "20th century materials" (e.g. steel, glass, and concrete), emphasis on abstraction and expression, minimalist aesthetics, and geometrical shapes (Arenibafo, 2017; McLeod, 1989; Rustin, 1989). With this approach they broke with the past and took a new path. Modernists advocated for progressive ideals and saw themselves as agents of social change, using design to envision and shape a better future for humanity (McLeod, 1989). Architecture

has always been a discipline of international relations and trends, but this accelerated rapidly during the era of modernism in the 20th century (Sklair, 2017). Capitalist globalisation, with a relatively small group of architects, forced the increasing demands for new buildings and urban renewal after the second world war (Sklair, 2017). Modernism was promoted as an international style that could be applied globally, reflecting the increasing interconnectedness of the modern world (Rustin, 1989). Furthermore, technical advancements and these constructions were leading in the design of buildings, in line with 'form follows function' stated by architect Louis Sullivan, emphasising the idea that the shape and design of a building should be determined by its intended function (Kesseiba, 2019). The era of modernism came to an end, but contemporary urban developments are often reinterpreted objectives of this modernist approach and integrated with new design trends and technologies. Contemporary modern architecture is heavily influenced by globalisation, liberal capitalist politics and financial accumulation (Davis, 2006; Sassen, 1991, 2004; Sklair, 2005, 2017). Global capitalism identifies transnational practices (crossing existing state borders) at the local, urban, and global levels with transnational key players in the economic (corporations), political (capitalist class), and cultural (consumerism) spheres. Architecture has not been exempt from this capitalist globalisation (Sklair, 2017). The competition between 'global cities', as introduced by Sassen (2004), is part of this globalisation process, which stands for a race between nodal points in the global economy, facilitating the flow of capital, information, and people across national borders. Davis (2006) found that contemporary architectural trends are characterised by sleek, corporate aesthetics that reflect the interests and values of the corporate elite. He states that skyscrapers and office towers often feature glass facades, minimalist designs, and state-of-the-art technology, symbolising power, wealth, and modernity. These buildings are the embodiment of 'global homogenisation'.

Modernist buildings and contemporary urban developments are very diverse, but recurring elements are visible. The city of Rotterdam functions as an example of modern contemporary development, shown in figure 2.5 (Kievits, n.d.). Beckers (2018) argues that the architectural discourse is focused on modern building in Rotterdam. This dominant culture created an innovative modern city with high-rise buildings made by 'starchitects' (used to describe highly acclaimed and internationally renowned architects who have achieved celebrity status due to their designs) to show the world Rotterdam's economic prosperities, innovation and modernity. A photograph with the American city of Chicago with the description "how Rotterdam looks like in several years", is according to Halbertsma (2001) a clear reference to a hope or wish for a modern city, as it would be realised in the future. The major urban development of *Wilhelminapier* in Rotterdam in the 1990s was promoted as "wonder of modern architecture" by the municipalities tourism agency (Beckers, 2018). Although, these developments were not only positive, because this new architecture had no connections with its local identity and history. Furthermore, critics indicate that the investments mainly attract wealthy people and that original residents can no longer afford to live in the area (Oostdam, 2017). Similar developments as in Rotterdam are visible in major cities globally. The uprising buildings are part of a global discourse in



Figure 2.5 Contemporary modern architecture in Rotterdam (Kievits, n.d.).

architecture, made by architects to create a new urban dynamic and to attract new wealthy citizens and investments (Beckers, 2018). Criteria for this discourse are not predominant, authenticity and uniqueness are central, but there are some recurring aesthetic elements, listed below (Heynen, 1999; Jencks, 2002; Kolarevic, 2005; Pallasmaa, 2007).

1. Composition and proportion of buildings: innovative compositions and proportions that may challenge traditional norms with a large-scale.
2. Materiality of buildings: use of innovative elements such as glass, steel, and concrete.
3. Symmetry and balance of buildings: characterised by dynamic forms and asymmetrical arrangements.
4. Buildings integration in surroundings: uniqueness and originality are leading, contrasting with existing contexts to create visual interest.
5. Colour use of buildings: cold colour schemes.
6. Internal unity and coherence of buildings: creating coherence through the integration of diverse elements such as structure, circulation, and program, often guided by principles of functionality and sustainability.
7. Level of details in buildings: low level of details without the use of ornamentation.

Critics of modernism, since its uprising in the 20th century as well the contemporary equivalent, primarily focus on the homogenisation of architecture, lack of context and embedding in surroundings, and focusing solely on financial accumulation while neglecting the socio-cultural impact. Sassen (2004) and Sklair (2017) argue that globalisation, transnational corporations and architects reshapes urban landscapes including the construction of iconic buildings and mega-projects designed to attract investment and project an image of modernity and progress. This global architectural discourse focused on investments and financial accumulation faded cultures in their competitive position with other cities (Sassen, 2004). The buildings produced by these forces create global homogenisation, according to Herrle et al. (2008). As they argue that the Western modernisation of buildings has been adopted in all parts of the world, resulting in high rise glass buildings which are more oriented on cross-border competition, than added value and implantation in the local environment. "Places, and the buildings that give distinctive meaning to them, are thought to be losing their unique identities" (Herrle et al., 2008, p. 221). Sklair (2017) argues that contemporary architecture reproduces the class structure of societies based on globalising capitalism represented in a global society of consumers. These forces provide global homogenisation of architecture, with a global architectural discourse, which in turn results in 'placelessness' (Relph, 1976) or 'non-places' (Augé, 1996). This means an environment lacking significant place and a lack of attachment to place caused by modernity (Castree et al., 2013). Embodied at city level in shopping malls, business districts, highways, and other alienated places. According to Relph (1976), mass communication, mass culture, and central authority are the "undermining of place for both individuals and cultures, and the replacement of the diverse and significant places of the world with anonymous spaces and exchangeable environments." Architecture is more than a technical or functional approach, according to Adamczyk (2015). It became a symbol of global prosperity that underpinned the global economy and flows of capital (Adamczyk, 2015). The ever higher, more iconic, and more innovative architectural discourse is problematic (Grubbauer, 2015). "As cities race to the top, constructing the glorious architectural edifices that stand symbolically to a city's global stature has been accompanied by the rise in a global market of 'off-the-shelf' solutions of one-size-fits-all buildings, models, and expert knowledges" (Adamczyk, 2015, p. 2).

In conclusion, modernism is a globally oriented approach focused on functionalism, innovation, and abstraction (form follows function) (Arenibafo, 2017; McLeod, 1989; Rustin, 1989). The contemporary equivalent is heavily influenced by globalisation, liberal capitalist politics and financial accumulation (Sassen, 2004; Sklair, 2017). These forces are characterised by sleek, corporate aesthetics that reflect the interests and values of the corporate elite. Especially features such as glass facades, minimalist designs, and state-of-the-art technology, symbolising power, wealth, and modernity. Recurring aesthetic elements are: innovative composition with a large scale, elements such as glass, steel and concrete, uniqueness and originality, use of cold colour schemes, etcetera (Heynen, 1999; Jencks, 2002; Kolarevic, 2005; Pallasmaa, 2007). However, critics note that this approach is creating placelessness with a lack of distinctive identities (Relph, 1976). The global homogenisation, in which all parts of the world adopt this Western architectural discourse, are thought to be losing cultural uniqueness by focussing on financial accumulation and cities global competitive position (Adamczyk, 2015; Castree et al., 2013; Grubbauer, 2015; Sassen, 2004; Sklair, 2017).

2.6 Synthesis

In order to research the concept of place identity and its connection to architecture, the interplay between people and place is of great presence. Place identity can be divided into 'people's place identity' (someone's personal and individual emotional bonds to places which form their identities) and 'place identity of a place' (identity shaped by people constructed as differences between places based on objective physical settings). These interpretations and perceptions by people form character and make places unique and distinctive from other places. Non-human actors, such as buildings and its exterior architecture, are crucial by shaping place identity.

Two contrasting approaches, (neo)traditional and modern, show friction in what role architecture plays when it comes to place identity. The modernists approach is characterised by large scale innovative glass structured buildings with cold colour schemes and a low level of details. Critics see this as a result of global capitalist forces resulting in the homogenisation of architecture globally with a lack of place identity. The traditionalists form a countermovement against this increasing placelessness through preservation of historical buildings and a revival of traditional aesthetics, craftsmanship, and cultural continuity in creating buildings that resonate with people's collective memory and cultural identity. Differently characterised as they advocate for local cultural continuity, but mainly recognisable as harmonious human scaled buildings blend in their surroundings with warm colour schemes and high level of details. Although there are contradictory scholars and the field of architecture and aesthetics are subject to preferences, these concepts show tensions in its discourse. Not only between place and people, modernist and traditionalists, but also between architects and laymen or the final users.

All these theories and conceptualisations have been scaled down to the essence to only focus on the scope of this research. The conceptual model (figure 2.6) shows the main concepts to create an understandable overview of fragmented concepts to ensure clarity in the following parts of this research. These concepts are essential for the interviews, which will be further explained in the following chapter.

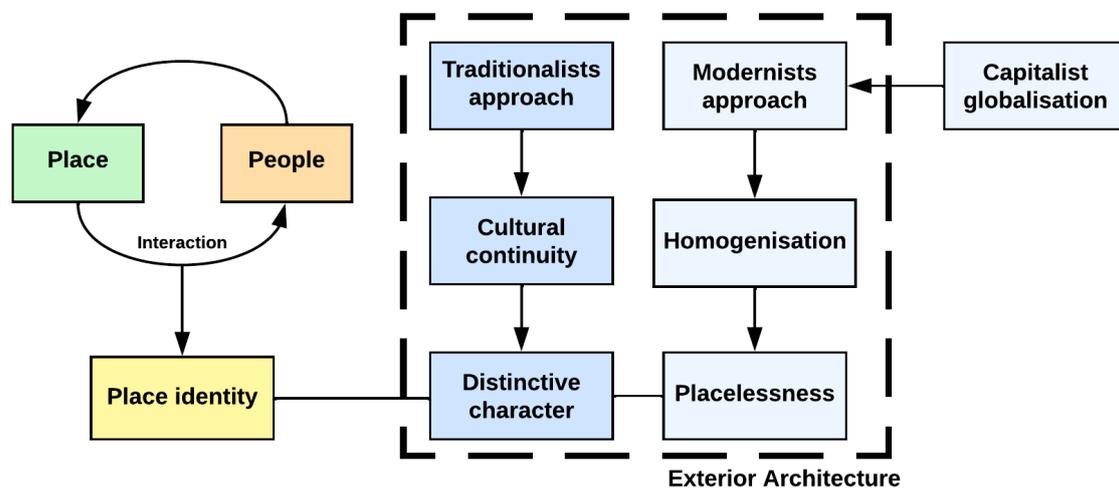


Figure 2.6 Conceptual model based on theoretical framework.

3. Methodology

Now that the interaction between non-human actors (architecture, buildings, places) and people have been examined, the attention is shifted towards the approach of this research. To provide insights in preferred architecture for urban planners and policy makers to leverage from the housing shortage, a qualitative approach was adopted. In order to understand how people relate, attach, and feel about dwellings/buildings and their exterior architecture, semi structured in depth photo elicitation interviews were conducted. The primary data from the interviews were linked to the secondary data from academic literature. The interviews provide insights into the literature, especially in the Dutch context.

3.1 Photo elicitation interviews

Theory driven Photo Elicitation Interviews (PEI) were used in this research. This qualitative method “is based on the simple idea of inserting a photograph into a research interview” (Harper, 2002, p. 17). The physical elements of the interview (photographs) are processed in different parts of the brain than words, according to Harper (2002). He argues that visual processes in the brain are evolutionarily older than verbal information processes. The use of photographs evokes deeper elements of consciousness and makes more use of the brain’s capacity. The visual material used with PEI can be collected in multiple ways, Matteucci (2013) indicates four versions: photographs produced by the research, gathered by the researcher, produced by the research participant, and gathered by the research participant. In this research the photographs were gathered by the researcher in order to select buildings in line with the three architectural categories. These theory driven photographs follow a list of criteria, based on the literature conducted in the theoretical framework, which will be further explained in the section about the structure of PEI. The substantiation to use PEI is listed below.

First, PEI stimulates rich discussions by providing visual stimuli that prompt participants to reflect more deeply on their experiences and perceptions (Harper, 2002). The visual incentives evoke emotions and memories that participants may not have been able to articulate otherwise. The combination of visual and verbal data allowed researchers to gather multifaceted information that may not be captured through traditional interview methods alone (Meo, 2010). Participants’ values, beliefs, attitudes, and meanings can easily be conducted with PEI.

Besides that, literature showed that urban memory is a crucial factor by producing place character and its distinctiveness from other places (Halbwachs & Coser, 1992; Hebbert, 2005; Rossi, 1983; Sargin, 2004). In order to evoke these individual and collective memories during the interviews, the use of photographs was crucial to understand the structure and foundation of these interpretations. Previous research showed that people connect their appreciation and feelings of places to other similar places perceived in their daily life’s (Degen & Rose, 2012). Thus, this is not about feelings of that exact location, but associations to similar locations connected to the architecture that is visible on the photographs. The fact that this research is focused on spatial and tangible elements (architecture), makes it evident to use photographs as the primary tool in the applied interviews.

Furthermore, the literature is clear about the sensorial influence in the experience of built environments (Degen & Rose, 2012; Highmore, 2009; Kalekin-Fishman & Low, 2010; Mason & Davies, 2009). The senses, especially vision, are part of people’s everyday experiencing. Photographs activate the visual sense, in order for participants to really experience the exterior architecture.

Lastly, in this research imagery is also essential for the description of various elements of architecture. Participants may be unfamiliar with architectural styles and terminology. To utilise this lack of knowledge, photographs were used as a tool to describe preferences and feelings that emerged during the interviews. The familiar phenomenon of photographs are helpful to ameliorate unclear interview situations (Richard & Lahman, 2015).

Photographs are useful to eliminate other objects and subjects by filtering the elements that are visible on the images. It creates a focus on the exterior architecture that is perceivable on the photographs. Other methods with visible elements, predominantly walk along interviews, were not positively reviewed to answer the research question. The pre-selected photographs by the researcher made it easier to utilise the architectural parts of the buildings, without sensorial distractions from other actors that do not include the scope of this research. These contextual circumstances could not be filtered

out of the frame, as the case with photographs. Other methods without photographs or visible elements were negatively reviewed in advance. When researching tangible elements of exterior architecture that need sensorial experience, the use of photo elicitation interviews emerges strongly in applicability.

3.2 Structure PEI

In order to understand the exterior architectural preferences by young adults in the Netherlands, and the way architecture fosters place identity, PEIs were utilised in this research. The PEIs were structured into three main sections. The first part was focused on the personal characteristics of the participant and architecture in general. In this section, no photographs were used to start with the participant's general view on exterior architecture and attachment to a dwelling. In the second part the theory driven photographs were used, defined as three exterior architectural categories (traditional, modern, and neotraditional). In this part the perceptions of the participants in connection with the architectural categories were central. Finally, in the last section these architectural categories were compared by the participants with all photos side by side. In this way, final comments could be questioned and conclusions drawn.

The separation of three architectural categories (traditional, modern, and neotraditional) made it possible to compare preferences and to collect insights of the aesthetic elements used by urban housing developments. These exterior architectural frameworks are all focused on the Dutch context, accompanied with photographs made on various places in the Netherlands. The chosen photographs were selected by criteria based on literature, which is further explained in the following sections. Image selection is a crucial element, because it can influence participants' responses during the interviews (Zhang & Hennebry-Leung, 2023). All photographs focused on the facades with close crop of the building in order to eliminate other distractions than architectural elements. The images shared similar photographic and scenic conditions, such as composition, lighting, and visibility, based on criteria used in research by Shannon (2014). This was essential to facilitate a reasonable comparison without parameters that influence participants responding. A degree of visual consistency across images was the foundation of this photo selection. Furthermore, the seven recurring aspects in the philosophy of aesthetics, as described in the theoretical framework, were used to define the three different categories. Only the 'integration in surroundings' was a criterion that could not be applied during the PEIs. This would create too many distractions of other actors, which would interfere with the focus on the exterior architecture. Although, the two architectural approaches think differently about the role of buildings to integrate in their surroundings. Traditionalists argue that buildings should blend in their surroundings to create an aesthetically pleasing whole. On the other hand, modernists argue that buildings should be unique in a way to impress (Krier et al., 2009; Sassen, 2004; Scruton, 2013; Sklair, 2017). The other six recurring aspects of aesthetics in architecture were taken into account by selecting the images. The outline of the interviews, with all the formulated questions, can be found in the appendix. Each photograph was printed out on an A4 page so the participants could look closely at all details of the buildings.

Traditional architecture

This architectural category is based on traditional culture and often reflects the unique environmental and social contexts of a place (Oliver, 1998; Rapoport, 1990). These historic buildings have different architectural styles, because they were made in different eras. Table 3.1 shows the recurring aesthetic elements of traditional architecture. The selected photographs were made in Nijmegen (figure 3.1), Amsterdam (figure 3.2), and Utrecht (figure 3.3). These buildings were constructed before the Second World War and can be labelled as historic (Koster & Rouwendal, 2017). The aesthetic elements of these dwellings are in line with the traditional framework.

Contemporary or historic building	Year of construction	Constructed before WW2 (1940 or earlier)
Aesthetic elements	Composition and proportion	Human-scale
	Materiality	Stone, wood and bricks
	Symmetry and balance	Distribution of visual weight
	Colour use	Warm colour schemes
	Internal unity and coherence	Cohesive whole
	Level of details	High level of details with ornamentation
Photographic conditions	Composition	Close crop showing all or nearly all of the building and little surrounding context
	Lighting	Front lit during the daytime
	Weather	No rain, snow, fall leaves
	Sky	Grey skies avoided
	Image quality	In focus, not grainy, not washed out or too dark; no photographic filters applied, not Photoshopped
	Image orientation	Horizontal
	Perspective	Taken from an angle or straight on

Table 3.1 Criteria for the selection of photographs in the 'traditional architecture' category.



Figure 3.1 Photograph A, situated in Stadscentrum, Nijmegen (Google Maps, 2023).



Figure 3.2 Photograph B, situated in De Pijp, Amsterdam (Google Maps, 2020).



Figure 3.3 Photograph C, situated in Binnenstad, Utrecht (Google Maps, 2017).

Modern architecture

Modern urban developments occur at several places in the Netherlands. The selected photographs were made in Amsterdam (figure 3.4), Eindhoven (figure 3.5) and Rotterdam (figure 3.6). These buildings are in contrast with the traditional dwellings. Not only does the year of construction differ (contemporary instead of historical), but the criteria for this architectural framework can be seen as the opposite of traditional. Modernists produce large scaled buildings, often featured with glass facades, minimalist designs, and state-of-the-art technology, symbolising power, wealth, and modernity (Davis, 2006; Sklair, 2017). The photographs represent this framework according to the criteria (table 3.2), based on the literature provided in the theoretical framework.

Contemporary or historic building	Year of construction	Constructed in this century (2000 or later)
Aesthetic elements	Composition and proportion	Large-scale
	Materiality	Glass, steel and concrete
	Symmetry and balance	Dynamic forms and asymmetry
	Colour use	Cold colours schemes
	Internal unity and coherence	Integration of structure, circulation and functionality
	Level of details	Low level of details without ornamentation
Photographic conditions	Composition	Close crop showing all or nearly all of the building and little surrounding context
	Lighting	Front lit during the daytime
	Weather	No rain, snow, fall leaves
	Sky	Grey skies avoided
	Image quality	In focus, not grainy, not washed out or too dark; no photographic filters applied, not Photoshopped
	Image orientation	Horizontal
	Perspective	Taken from an angle or straight on

Table 3.2 Criteria for the selection of photographs in the ‘modern architecture’ category.

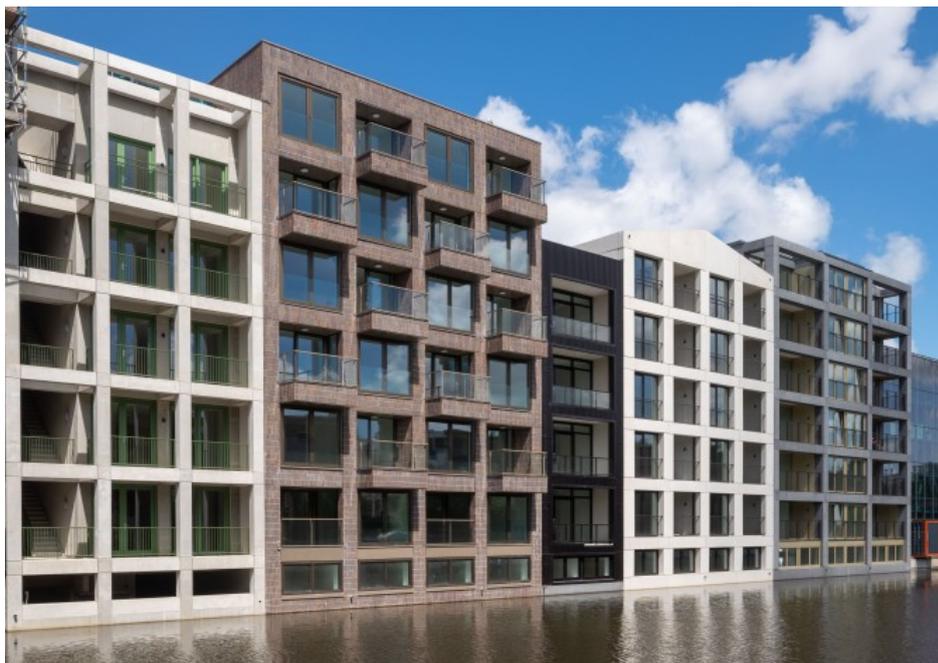


Figure 3.4 Photograph D, situated in Oostenburg, Amsterdam (VORM, 2024).



Figure 3.5 Photograph E, situated in Strijp S, Eindhoven (Google Maps, 2023).



Figure 3.6 Photograph F, situated in Maritiem District, Rotterdam (NVM, 2024).

Neotraditional architecture

Neo is a derived word from Latin and means young or new. Neotraditional buildings are newly built, but with the use of traditional design principles. The most present difference between traditional and neotraditional buildings is the year of construction. Neotraditional can be seen as framework, inspired by historic buildings. But this category is not a single architectural style. The used images have a variety of styles. However, the same criteria of the neotraditional framework were applied. According to scholars, these neotraditional dwellings foster place identity and a distinctive character in the same way as historical traditional neighbourhoods (Hamer, 2000; Kim, 2000; Levi, 2005). On the other hand, other scholars are worried about the value of real historic architecture with the uprise of neotraditional dwellings (Huxtable, 1997; Sorkin, 1992; Tyler, 2000). This form of architecture is used as countermovement on modern architecture in the Netherlands. The selected photographs are situated in urban developments in Rotterdam (figure 3.7), Helmond (figure 3.8), and Nijmegen (figure 3.9). These buildings were selected because of construction after the year 2000. Furthermore, the other criteria (table 3.3) which follow the neotraditional framework (identical with the traditional criteria) occurred.

Contemporary or historic building	Year of construction	Constructed in this century (2000 or later)
Aesthetic elements	Composition and proportion	Human-scale
	Materiality	Stone, wood and bricks
	Symmetry and balance	Distribution of visual weight
	Colour use	Warm colour schemes
	Internal unity and coherence	Cohesive whole
	Level of details	High level of details with ornamentation
Photographic conditions	Composition	Close crop showing all or nearly all of the building and little surrounding context
	Lighting	Front lit during the daytime
	Weather	No rain, snow, fall leaves
	Sky	Grey skies avoided
	Image quality	In focus, not grainy, not washed out or too dark; no photographic filters applied, not Photoshopped
	Image orientation	Horizontal
	Perspective	Taken from an angle or straight on

Table 3.3 Criteria for the selection of photographs in the 'neotraditional architecture' category.



Figure 3.7 Photograph G, situated in Kratingen, Rotterdam (BTR, 2016).



Figure 3.8 Photograph H, situated in Brandevoort, Helmond (Google Maps, 2017).



Figure 3.9 Photograph 1, situated in Koningsdaal, Nijmegen (Google Maps, 2022).

In order to compare the different architectural categories, the same questions were asked per category, as shown in the appendix. This semi-structured way of interviewing, in which some questions were prepared but there was still room to ask impulsive and follow-up questions, made it easier to get in depth. In the end, the participants had to select the categories in order of their preferences. This last step was crucial to understand in what way policymakers can meet the wishes of young adults. This group is affected by the housing crisis and are an important target group for urban developments. Before the interviews took place, a pilot interview was conducted. No weaknesses were detected and the structure of the interview did not require any adjustments.

3.3 Data collection

The PEI's took place between April 24th and May 28th, 2024. In this research a sample size of 15 participants ($n = 15$) was conducted. Difficulties when it comes to saturation or transferability to the population as a whole can easily occur, but Loeffler (2004) and Padgett et al. (2013) argue that 13-14 participants provides adequate saturation with photo elicitation interviews. To assure this saturation of data a minimum of 15 participants has been determined. The participants were recruited by making use of the snowball sampling. This recruitment technique in which a small number of participants reach out to other potential participants within their network (Parker et al., 2020). The snowball sampling technique limits selection bias, since this technique results in participants who meet the target group requirements (age between 18-30 and currently living in the Netherlands) without knowing these participants at forehand. "The researchers use their own social networks to establish initial links, capturing an increasing chain of participants" (Parker et al., 2020). To ensure the diversity in gender, age, current dwelling, and educational level within the sample, the researcher only contacted benevolent potential participants who met sample diversity requirements. The used messages between researcher and participant can be found in the appendix. Eventually, this resulted in a response group of 15 participants with ages between 21 and 29. All respondents were currently living in the Netherlands, with a wide variety in educational level, place of birth, and current dwelling situations. All interviews took between 30 and 45 minutes. The sample of 15 participants is as follows:

Respondent	Age	Gender	Educational level	Place of birth	Current dwelling	Date of interview
1	23	Female	Academic pre-master	Utrecht (Utrecht)	Student housing	24-04-2024
2	26	Female	Academic master	Lagos (Nigeria)	Rented apartment	24-04-2024
3	28	Male	Academic master	Brachterbeek (Limburg)	Homeowner	24-04-2024
4	24	Female	Academic master	Berkel-Enschot (Noord-Brabant)	Student housing	25-04-2024
5	29	Male	Applied science	Brunssum (Limburg)	Homeowner	26-04-2024
6	28	Male	Applied science	Apeldoorn (Gelderland)	Homeowner	26-04-2024
7	23	Male	Academic bachelor	Laren (Noord-Holland)	Student housing	29-04-2024
8	21	Female	Academic bachelor	Gouda (Zuid-Holland)	Student housing	29-04-2024
9	24	Female	Academic master	Amsterdam (Noord-Holland)	Rented house	29-04-2024
10	28	Male	Academic bachelor	Vienna (Austria)	Rented apartment	03-05-2024
11	25	Male	Academic master	Rotterdam (Zuid-Holland)	Student housing	22-05-2024
12	21	Female	Secondary vocational education	Utrecht (Utrecht)	Parental home	24-05-2024
13	28	Male	Academic master	Eemnes (Utrecht)	Rented apartment	25-05-2024
14	24	Female	Academic master	Uithoorn (Noord-Holland)	Parental home	28-05-2024
15	24	Female	Applied Science	Apeldoorn (Gelderland)	Rented apartment	28-05-2024

Table 3.4 Table of sample characteristics.

After 15 interviews the point of saturation occurred. The data derived from the interviews with young adults is not representative for the entire population of young adults living in the Netherlands. This research provides insights in the way young adults perceive at and feel about exterior architecture, what elements they prefer, and how the housing shortage can leverage from these perceptions.

3.4 Reliability & validity

This method was very consistent by using a standardised procedure, which is outlined in the appendix. The same pair of questions were asked with repeated cycles of architectural categories, which makes this research reliable. Additionally, the PEI structure could be applied to other samples, demonstrating the method's reliability and potential for replication. As well other architectural categories can be applied, as long they are selected on sophisticated criteria based on theories, similar to the categories within this research. For improved reliability, future studies could ensure the interview locations more concisely to minimise the impact of external factors. Although, the photographs helped participants focus on specific architectural elements. Making the study's findings more applicable to real-world architectural assessments. The findings of this study can be generalised to other contexts, such as other geographical locations (at city level or in another country), or other populations.

3.5 Data analysis

The interviews were recorded by using a dictaphone application on the researcher's phone to ensure that all transcripts could be analysed. In addition, the recording made it easier for the researcher to focus on interview techniques, such as follow-up questioning on certain interesting answers given by the participants, without distractions from taking notes. Afterwards, these voice recordings were

uploaded on Word, which produced the transcripts. These transcripts were eventually checked and corrected to fully represent the data, making it more convenient to analyse. The data was analysed in NVivo, by using open and axial coding following the thematic analysis. This inductive analysis allows the researcher to derive new concepts and ideas without preconceived notions (Braun & Clarke, 2006). It enables the researcher freely to identify patterns in data. For this research it was needed for the interpretations, experiences, and perceptions of participants to analyse in an open and flexible way to generate unbiased insights. These insights were eventually used to generate recommendations for policymakers and urbanists involved by urban housing developments.

The first step was open coding, in which the researcher identified distinctive themes and concepts to discrete parts of the data. These 'codes' enabled the researcher to continuously compare and contrast similar events within the data (Williams & Moser, 2019). This resulted in 54 codes, which are visible in the appendix. The second step was axial coding, at this point the researcher connected the codes developed with open coding to organise all data. With axial coding, found grouped categories encompass a number of different codes. The grouped categories are: urban memory, emotional bond with dwelling, selecting a dwelling, architecture as cultural continuity, and exterior architecture. In this process some codes conducted during open coding were re-labelled. This emphasises the importance of the non-linear process of coding, as stated by Williams & Moser (2019). The last step was rearranging the themes, and the connected codes into a narrative that fits the essence identified from the data.

3.6 Limitations of method

By using the photo elicitation interview method, a limited factor is that the researcher selected the photographs based on theories. The advantage of this is that specific architectural styles can be evaluated. On the other hand, participants are limited in expressing their own ideas and thoughts of architecture. For instance, some styles which are excluded within this research can be preferred by participants. In this way, a participant can answer differently because of the small range of options.

The geographical focus of this research, the Netherlands in a countrywide perspective. Could limit the generalisability of the findings to other regions or smaller towns in the Netherlands. The focus on specific urban developments selected with the theory driven criteria could be too broad. Not all architectural elements in the Netherlands are commonly recognisable countrywide. Which could influence the interpretations by participants, as well as the recommendations produced by these outputs.

One of the recurring aesthetics of architecture, referred to in the theoretical framework, is 'the integration in surroundings' (Bachman, 2003). This aspect of aesthetic theories could not be applied in the PEIs. The context of the buildings compared to the architecture in the neighbourhood or city were excluded from this method. Furthermore, the sensorial importance in urban contexts could also not be properly included in the application of this method (Degen & Rose, 2012). The experience of architecture through photographs can be felt differently than in everyday life. It limits the sensorial experience of buildings and its exterior architecture.

3.7 Ethics

All interviews were anonymous and held in Dutch to create as much comfortability with the Dutch speaking participants. The location for the interview was selected by the participant, due to practical circumstances and as well to create a comfortable setting. This resulted in some interviews being held at the participant's home and others at the researcher's home in Utrecht. During the interviews, the participants were asked about their experiences and perceptions. To protect confidentiality, the researcher assured them that it is optional to not respond if they did not want to. Furthermore, the researcher tried to ensure a safe environment as much as possible: by asking whether the participants were comfortable, indicating that no mistakes could be made, and creating a friendly atmosphere. Furthermore, the used voice recordings were not saved on a cloud service to protect it from a data breach, which the participants approved on. The recordings were deleted after the transcripts were produced, as agreed with the participants.

3.8 Personal positionality

As a researcher it is important to reflect on your own positionality, which can influence the research process and findings. Transparency about personal background, with its assumptions, biases, and preconceptions, can reduce ambiguities and sensitivities within research (Streule, 2020). When it comes to the position of the researcher in this research, multiple characteristics influence the process. With a cultural background in the Netherlands, some perceptions of architecture are conflicting. Having a personal preference in aesthetics of architecture shape a position with close ties to the researched subjects, such as positive urban memories of historic buildings. To limit these researcher biases, the researcher had to distance from these perceptions, and focused on findings by literature and participants. The fact that the researcher meets the requirements of the target group, being 24 years old and living with the same difficulties when it comes to the housing crisis. This could be conflicting with the interests of doing this research about the housing crisis. Nevertheless, this can be seen as an advantage, as it allows the researcher to show more understanding with the participants during the interviews or reach a deeper layer with empathy which enriches the results. It also created a certain degree of equality with the participants.

Furthermore, as a student in the field of built environment and urbanism a focus on spaces and urban elements is essential, which can result in unconscious assumptions. These assumptions and knowledge can be seen as standard for an urbanist with this background but can be hard to understand for laymen. During the interviews the researcher took this into account as much as possible by asking simple and open questions, omitting the researcher's own interpretations, and avoiding jargon. This knowledge difference, in combination with the position of a researcher, could have affected the interactions with participants. The researcher was aware of these power dynamics and tried to be transparent about this by properly briefing participants on the process.

Lastly, the researcher's socioeconomic status could influence the selection process of the photographs. For instance, by selecting dwellings that are reachable for the researcher, but not for every person with other socioeconomic backgrounds. Although financial aspects were not taken into account within this research. It can be confronting for participants with a lower socioeconomic status to perceive these unfeasible dwellings. The researcher tried to find different types of dwellings within an architectural category. For example in the traditional category, in which a prestigious building (photograph A) and a building for social housing (photograph C) were combined. When awareness of the researcher's personal position is applied in research it ensures more inclusive research.

4. Results

In this chapter the results of 15 photo elicitation interviews are outlined by using open and axial coding within thematic analysis. This resulted in five core categories which show the main findings of the data collection and analysis. The used references from the transcripts can be found in the appendix. All the used quotes were translated from Dutch into English.

4.1 Exterior architecture

During the semi structured interviews with photo elicitation all participants had feelings, opinions, and assumptions about exterior architecture. There was not one agreement in what way exterior architecture influences participant's behaviour or the way they focus on while selecting a dwelling. Although, the feelings, opinions, and perceptions that occurred by observing the photographs was almost agreement on among the participants. A dichotomy between simplistic and homogenous interpreted architecture, and detailed and authentic interpreted architecture became strongly apparent during the analysis. The following section outlines these two groups of exterior architecture.

Simplistic and homogenous architecture

The first group of architecture, as interpreted by the respondents, was mainly mentioned with photograph B (traditional building in Amsterdam) and all photographs of category 2 (modern architecture). Recurring terms and feelings that were used to describe the first group were: "cold", "chilly", "colourless", "impersonal", "dystopian", "very modern", "anonymous", "crammed", "simple", "compact", "no character", "blocky", "sleek", "blokkendoos", "repetitive", "homogenous", "office-like", "simplistic", "static", and "rechttoe rechtaan". Factors such as the applied scale (high-rise buildings), the use of colour (cold colour tones), the monotony of the buildings (repetitive forms), and the lack of details (simplistic facade) are the main clusters of arguments that make this group less appreciated, according to the interviews. Participant 2 (26, rented apartment) reacted which is in line with almost all participants:

"Oh yes sorry, when I look at this, it is really horror. [...] Category two is not my favourite. It's efficient, because a lot of people can live there, but who do you really know in such a building? Sorry, but in this case I am from the countryside. I also think it's a bit lonely, and so office-like. It doesn't look like anything."

Photograph D (modern building in Amsterdam) was the least negatively interpreted building within the first group. The building visible at photograph D has a smaller scale, and differentiation with forms and colour use, which makes it more pleasant, like participant 1 (23, student housing) explains when her was asked to describe what she meant with "this kind of buildings" at category 2 (modern architecture):

"Yes, high-rise flats. Lots of units in them. Multiple tall buildings next to each other. That is really something which is more visible in big cities abroad. Photograph D gives me more the idea that they wanted to make it more homely, because it is also only 4 or 5 levels high. It is also less monotonous, even though all the buildings are pretty much the same. The roof changes a bit and the windows are slightly different. Here there is an indoor balcony, then an outdoor balcony. There are more differences between the dwellings at photograph D, instead of just one big block of the same thing as photograph E (modern buildings in Eindhoven) and F (modern building in Rotterdam)."

Only participant 6 (28, homeowner) was more enthusiastic about category 2 (modern architecture), which provides nuance to the narrative that the other 14 participants shape. His argumentation is as follows:

"Yeah, I'm not really into old buildings. I can like old buildings, but I just cannot see myself living in that. I directly think about all the maintenance an older building needs. I prefer a building which needs the least maintenance, so that is mostly the case with newly built dwellings. So, I do not really want a house like picture A (traditional building in Amsterdam). I do not need a home you can recognise out of thousands. I am also fine when my home is similar to other buildings in a street and prefer newly built buildings."

Some other participants give nuance to their negatively interpreted answers about the simplistic and homogenous architecture. For example, participant 8 (21, student housing) said that she could live in a modern building as category 2, but prefers a building which is more beautiful, and personal with a smaller scale. Comments such as, “for me, the interior is more important” as stated by participant 12 (21, parental home) show that participants try to lower their tone about the earlier recurring feelings of this type of architecture. The shaped narrative of simplistic and homogenous architecture was strongly negatively interpreted, but most participants did not exclude buildings like this to live in.

Detailed and authentic architecture

The second group of architecture, as interpreted by the respondents, was mainly mentioned with photograph A (traditional building in Nijmegen), C (small traditional building in Utrecht) and all photographs of category 3 (neotraditional architecture). Recurring terms and feelings that were used to describe the second group of buildings were “characterful”, “beautiful”, “authentic”, “warm”, “old-fashioned”, “small detailed”, “artistic”, “unique”, “cute”, “cheerful”, “playful”, “history-filled”, “homely”, “gezellig”, “frilly”, “atmospheric”, “peaceful”, “spacious”, and “wealthy”. Factors such as used material (warm coloured bricks), rich use of ornaments (detailed facades), variation between the buildings (uniqueness), and colour use (vibrant colours) are the main clusters of arguments that make this collection much appreciated, according to the interviews. Participant 13 (28, rented apartment) explained why these buildings have character, which is in line how almost all participants interpreted this group of architecture:

“Because it does not come across as a standard kit. It's not a house which you can find everywhere in the Netherlands. [...] Old details with those white, what do you call it, stone lines. Also these turrets. [...] It comes across as authentic too. I also like those steps to the doors.”

Both category 2 (modern) and 3 (neotraditional) were developed after the year 2000, which makes them relatively newly built, but with totally contrasting exterior architecture. When asked about the differences in appreciation between these categories, almost every participant preferred the neotraditional buildings. According to the participants the neotraditional buildings contain more detailing, have more authenticity, more character, and with a smaller scale than the modern architecture of category 2. This commonly shared preference, and its indicators, were explained by participant 14 (24, parental home). She, and other participants, see the practical benefits of sustainability measurements of newly built buildings, such as insulation, double glazed windows, and floor heating. Combined with aesthetically appealing elements, such as detailing, authenticity, brick use, uniqueness, and use of vibrant colours, which makes neotraditional dwellings favoured by almost all participants. The answer of participant 14 shows this:

“I do like houses with a bit of an older feel and with such detailing. I prefer that over a flat. It does not really matter to me how old a house is. On the contrary, I think it is nicer, or maybe better for yourself if it is modern but looks older. In a way that it has probably better insulation and things like that. Whereas an old house might look nice, but will have all sorts of defects.”

Based on its exterior architecture, the neotraditional buildings of category 3 was the most preferred type of building to live in, chosen by twelve participants. Followed by the traditional buildings of category 1, which was preferred by three participants to live in. However, many participants found it difficult to choose between category 1 (traditional) and 3 (neotraditional), because both categories have a lot of similarities. The modernistic buildings showed in category 2 were never preferred by participants. Only one participant did not select category 2 as least favourite place to live in.

This dichotomy of exterior architecture, based on the feelings, opinions, and assumptions by participants, show strong emotional ties with exterior architecture. The following sections go more in depth into where these associations come from, and if it influences the selection process of a dwelling.

4.2 Urban memory

During the interviews most participants linked the buildings visible on the photographs with urban contexts they know from daily life. These photographs evoked memories of the respondent's personal

life, thoughts of similar places, or events that took place during previous inhabited dwellings. These urban memories can be positively interpreted, but also negatively. For example, participant 13 (28, rented apartment) described memories of positively experienced places from his daily life by seeing traditional architecture:

“I do like it when I am walking through these kinds of streets. It always gives me a nice and cosy idea. I was in Zeeland last week. A lot of this kind of construction is there, or at least something like it. Those streets were very cosy. A friend of mine, who lives in Naarden, also lives in one of those streets. That's also very cosy, so yes I do like it.” (13).

Positive urban memories occurred limited when talking about the modern architectural buildings (category 2), but participant 11 (25, student housing) had a memory of a similar place as photograph F (modern building in Rotterdam):

“Photo F makes me think of sitting near the water in Rotterdam, where you have the old harbour there, at Leuvehaven, as it's called. Where you have lots of green and a park where I sat a lot. That's where you have this image as a backdrop, as you sit at the waterfront.”

On the other hand, participant 2 (26, rented apartment) was reminded of an unpleasant event in her life when seeing the high-rise buildings of category 2:

“Yes, it's very stupid to say this, but I briefly thought about a friend of mine, from my studies, whose best friend jumped off a flat. Yes, that's not a nice thought, but that's what it reminds me of.”

But negative emotions occurred as well when talking about traditional buildings. Participant 6 (28, homeowner) thought about a familiar dwelling of a relative he knows:

“An uncle of Miranda [girlfriend] lives in a house like that. So, I have been there a couple times and always think about how old that house is. I really would not want to live in there, because I already know what it is like in these kinds of buildings.”

In this way, negative and positive events from someone's personal life were related to buildings. They came up with these thoughts while perceiving the buildings. Although, these memories were not always influential in the way they appreciate buildings. Most urban memories were neutral, as thoughts that came across, like a familiar place they visited. For example, multiple associations with working class neighbourhoods were made with photograph C (small traditional building in Utrecht), in which there was no unequivocal conviction. Respondents called such neighbourhoods “cosy, cute, and homely”, but were also reminded of “people with antisocial behaviour”. Other common associations participants made were “urban” and “village-like” feelings, sometimes even connected to “farms”. Categories 1 (traditional) and 2 (modern) have predominantly an urban feel, according to the participants. Photograph A (traditional building in Nijmegen) was remarkably often associated with “prosperous neighbourhoods”. Depending on participants' personal lives, a neighbourhood they were familiar with was mentioned, such as wealthy districts in Arnhem, Utrecht, Den Haag, or Gouda. On the other hand, photograph C (small traditional building in Utrecht) and H (small neotraditional building in Helmond) were linked with familiar places as well, but then in a rural context, such as: “coastal fishing village”, Naarden, or “a small town in Friesland”. Both urban and village-like memories were linked to recognisable places, such as: where relatives live, where they have been on holiday, where they travel past by car, or when they cycle to work. Observations from one's personal life were a constant factor in urban memories during most interviews.

Mentioning personal memories, familiar places, and other associations in an urban context, did not necessarily influence the way people perceive a building. These urban memories did not create a positive or negative image of a building and its exterior architecture. In some occasions participants had a neutral feeling, but were just reminded of a place. Participant 7 (23, student housing) explained this when talking about photograph E (high-rise modern building in Eindhoven):

“Photo E is very similar to a place I lived closely to in Amsterdam, but more the area around RAI station, so I immediately associate that with being on the way with public transport. Not necessarily a negative feeling, but kind of a waiting feeling [...]. You'd rather have that done, than be about to start that, you know. I don't really know the emotion I would associate with that, but a kind of waiting feeling. But that has nothing to do with the buildings. That's more just a kind of association with a place it reminds me of.”

4.3 Emotional bond with dwelling

When asked about the way participants connect and attach to dwellings, most respondents mentioned their parental home, or in other words: “the place they grew up”. Participant 5 (29, homeowner) explained a feeling almost all respondents feel with their parental home:

“I mainly think about the past, the memories you have. You grow up somewhere, especially the house where I lived with my parents, in Twello. That's just a source of memories. My parents still live there, and I still visit that place. When I walk in my old bedroom, it evokes a certain feeling with memories. It's crazy how you can have such an emotional attachment to a house. I think, I will find it strange if my parents ever move, the fact that they will no longer live there.”

Other participants described the attachment with their parental home like: “as a child your home is your whole identity”, and “the feeling of home”. The indicators of an emotional bond with a dwelling included memories from youth, a pleasant and safe feeling because of the recognisability of the dwelling, and a spacious environment in which they had the space to grow up. When becoming an adult, participants experience a different bond with their home, a less close bond than the home they grew up in. Participant 7 (23, student housing) argues:

“It changes through growing up, of course my current dwelling still feels like home, but I mainly see it now as a place where I sleep and where my stuff is, you know? It's a bit more practical, or a bit more pragmatic. [...] I don't necessarily think it is due to the way a house looks, but more about the lifestyle which changes while you are getting older. As a child, of course you're at home and with your family all the time and it is the place you basically have all your things. Nowadays I have a very busy life, so it also has something to do with the fact that I am not at home that much, except to sleep.”

Criteria which positively influence the emotional bond or attachment with a participant's current dwelling include: friends and relatives that live closely, interior architecture and styling, social cohesion with neighbours or roommates, and the amount of effort invested to make it “your place”. It is important to feel proud of your dwelling, as participant 10 (28, rented apartment) explains:

“I just like it when I can have people over, then I also feel more at home. It also makes me proud of my home, which makes me feel connected to my home and the place I live. A space where I can be myself, and where I have the freedom to invite people.”

Participants who are homeowners feel a stronger attachment to their current home than the rented dwellings they lived in before, because it is “owned by themselves”, and they have put more effort into making it “feel like home”. Besides that, buying a home makes them more critical, because they see it as a long-term commitment. Furthermore, participants take the desire to have children into account and prefer a spacious dwelling with a garden. Most participants agree that the importance of exterior architecture increases when searching for a house to buy, compared to a rented dwelling. Participant 3 (28, homeowner), who lives in a bought dwelling, explains the importance of exterior architecture to attach with a home:

“Yes, it is the first thing you look at. You see on Funda [Dutch website for real estate], for example, that people never advertise from the inside, but from the outside, so in that sense I think the outside is important. Maybe even more important than the inside. For me, the outside of the property is important. That wasn't the case with my rental flat, because the mindset at that time was: ‘you just need to have a place to live, and it is rented so you know it is temporary’. In that sense exterior architecture is of less importance.”

Participant 9 (24, rented house) and 14 (24, parental home) have had a history with many moves due to divorced parents. They feel less attached to a dwelling, and they easily feel at home at a new place. Participant 9 is clearly about moving to new places:

“I do think I can easily move to a new place, because of my dwelling history. I can quickly think: oh this is a nice place, let’s try something new. I’m used to it.”

4.4 Architecture as cultural continuity

When asked whether these buildings were reminiscent of the Netherlands, many participants responded positively at categories 1 (traditional) and 3 (neotraditional), often as “typically Dutch”. Although, participants found it difficult to pinpoint what elements make it typically Dutch architecture. Elements such as, use of bricks, “dakappelen”, the small size of dwellings, the white coloured ornamentation on facades, and the housing typology (“rijtjeswoningen”, “onder- en bovenwoningen”). During the interviews, participants appointed these elements, as participant 14 (24, parental home) did:

“Yes, as in not that I actually know it, but just this kind of dormer. You just have that a lot in the Netherlands. [...] Photo I has these stripes on the buildings, I just see that a lot when I cycle around. I have lived in several cities and these elements are widely used. So I think it is just the building style, the use of bricks. For example, in Photo G, those little white ornaments above the windows [...] and these bay windows too, yes, that is very Dutch.”

Furthermore, category 2 (modern architecture) was often associated with Dutch architecture, more as recognisable structures visible in everyday life. Participants did not call it typical Dutch “overall”, however it was very identifiable with the international oriented parts in the Netherlands, with references to “Zuidas”, Rotterdam, and The Hague. A more “generic” way of architecture, called as “American style”. Some participants called it Dutch architecture because the Netherlands is a densely populated country. They saw it as the new reality we live in, which makes it Dutch in itself. Participant 10 (28, rented apartment) explained why it reminded him of the Netherlands, but not as typically Dutch:

“No, not really. Maybe a little, but that is also because of the recency bias of course, that you just see these kinds of buildings in your surroundings. I was recently in Vienna, where I also saw relatively new apartment buildings that were also similar in architectural style. A bit more modern. No, I don’t think this is uniquely Dutch or anything like that. Yes, it reminds me of the Netherlands, because I see these kinds of buildings in the Netherlands.”

4.5 Selecting a dwelling

The current housing crisis and dwelling shortage in the Netherlands influences how participants perceive buildings shown during the photo elicitation interviews. Mainly category 2 (modern architecture) was mentioned as typical newly built buildings to accommodate a lot of dwellings with limited space utilisation. Terms such as “crises building”, “mass production”, “constructed as fast as possible”, “efficiency as leading principle”, “buildings without character”, “cheaply built”, and “less focus on aesthetics” were used to imply the dwellings produced by this crisis. When asked about feelings that occur by seeing category 2, participant 1 (23, student housing) expresses her concerns when it comes to the housing shortage:

“I think fear, don’t know if that’s the right word, but I am afraid that this will be the future. I think that we will see this much more to solve the housing shortage, to accommodate all the people. So, if we have to build up the height, then make it a bit more interesting. Make it a bit nicer for the eye, instead of building simply into the sky.”

Participant 10 (28, rented apartment) is less worried about these high-rise developments, but does personally not prefer to buy a dwelling like this:

“I don’t think more housing is going to solve the problem of housing prices. [...] Well, I think it’s actually quite sensible to build quite high, because you just make efficient use of the space

you have. As long as those buildings are not empty and there are people who want to live in them, then I think it's a very good solution to just build in height. For the cityscape maybe not great, but of course it also depends on where you build it. If you just still have a characteristic city centre or something like that. Yes, then I would support it.”

The housing shortage not only influences the aesthetics of architecture, but participants also indicated that their choices are limited due to this crisis. Limited demands and principles can be maintained when looking for a home, according to respondents. Participants are “already pleased when they found a place to live”. Exterior architecture is a limited indicator in such situations, as participant 4 (24, student housing) points out:

“It is more about being able to live cheaply. And it is more about the size on the inside. Currently I have quite a big room. So yeah, I was more concerned about that, instead of how it looked on the outside. I paid more attention to other aspects than how the house looked on the outside.”

Respondents who already are a homeowner, or who are currently looking for a dwelling to buy, were more attentive to the technical conditions of the buildings shown during the interviews. Energy consumption, costs in maintenance, the size of the plot and the house, and sustainability are of greater importance than by selecting a rented dwelling.

Not all participants agree on the importance of exterior architecture to select a dwelling, because of the earlier mentioned housing crisis and difference between rented and bought dwellings. However, all participants showed strong opinions during the interviews when talking about the elements of exterior architecture visible on the photographs. Dominantly positive associations were made with traditional and neotraditional buildings, except for photograph B (traditional building in Amsterdam). Dominantly negative associations were made with modern buildings. Some recurring preferred elements of exterior architecture were: dwelling with smaller size, variation between buildings which make them distinguishable from other dwellings, and material and colour use that gives character to a building.

5. Discussion

5.1 Interpretation of results

As mentioned in the results chapter, five core categories resulted from the 15 photo elicitation interviews by open and axial coding within thematic analysis. Participants shared varied opinions, perceptions, and assumptions about exterior architecture, categorised into two main groups: simplistic and homogenous architecture versus detailed and authentic architecture. Other concepts as urban memory, the emotional bond people have with a dwelling, and the housing crisis were named during the interviews. Furthermore, the role of place identity recurred with “typical” Dutch architecture. In the following sections, all these results will be interpreted and connected to the literature provided in the theoretical framework. This discussion chapter will conclude with a list of policy recommendations for Dutch urban planners and policymakers on how to foster the identity of place in the context of housing shortage.

The role of exterior architecture

Participants had different opinions when it comes to the importance of exterior architecture, from great importance by selecting a dwelling to not even focussing on exterior architecture. Exterior architecture has a more subconscious influence on participants, hidden in their approaches to and experiences about certain types of architecture. People like to live in a house they feel at home in and the way the outside of this dwelling looks plays a role in how they feel about it, in a conscious or subconscious way. Forms of architecture influence how people feel and behave, especially when it is about their own dwelling. Although, participants found ways to cope with in their opinion less attractive exterior architecture. They name the importance of interior architecture, affordability, or shared their understanding of less appreciated buildings. These coping mechanisms are strongly connected to the housing crisis, which will be further discussed later in this chapter.

Many of the recurring elements in the philosophy of aesthetics in exterior architecture were mentioned during the interviews: composition and proportion, materiality, symmetry and balance, integration in surroundings, colour use, internal unity and coherence, and level of details (Alexander, 1979; Bachman, 2003; Ching, 2023; Lawrence & Low, 1990; Massari et al., 2010; Pallasmaa, 2007; Sağlam, 2014). These perceptions will be further discussed in the following sections. Although, symmetry and balance were not once mentioned during the PEIs. It can be concluded that this part of aesthetics is less important for the participating young adults. The integration in surroundings was a recurring element in exterior architecture that was not taken into account during the research. Mainly because these elements could not be perceived during the PEIs. Although, this was multiple times mentioned during the interviews. Participants see the importance of the integration of exterior architecture and forming a cohesive whole in the neighbourhood.

Interaction between exterior architecture and people was predominantly present when participants shared their perceptions and experiences about the buildings that were visible on the photographs. Resulting in a dichotomy in exterior architecture: simplistic and homogenous, and detailed and authentic.

Simplistic and homogenous architecture

All the photographs of the category with modern architecture and photograph B (traditional building in Amsterdam) were predominantly negatively perceived by participating young adults as stated in the results. Terms such as “colourless”, “anonymous”, “impersonal” and “repetitive” shape a collective negatively interpreted identity of modern architecture in the Netherlands. Participated young adults do not prefer to live in an impersonal environment in which they cannot bond with their neighbours, the neighbourhood, or with their dwelling. According to the interviews, four main explanations for these negative perceptions of modern architecture were identified:

First, the scale of the buildings were perceived as too large, especially the high rise buildings of photograph E (modern buildings in Eindhoven) and F (modern buildings in Rotterdam). This aligns with previous research by Ching (2023) and Baker (2009) in which they argue the importance of a ‘human-scale’ to create harmonious and visually pleasing structures. The relationship between elements and their proportions within a space is a crucial factor in aesthetics of exterior architecture. Participated young adults prefer a smaller scale of their dwelling, which was dominant in the

participants' appreciation for photograph D (figure 5.1). This building has only six storeys, making the building more approachable to humans. In comparison with 20+ storeys of the buildings on photograph E and D, which were less appreciated because of their height. Participants mentioned their worries about the integration of these buildings in the surroundings. High rise buildings should not be built besides historical city centres, or other historically important places in the city. Although the aesthetic element of 'buildings integration in surroundings' (Bachman, 2003; Gehl, 2010) was not researched, due to the use of photographs in which the neighbourhood was not visible, it was still mentioned by participants.

Furthermore, the use of cold colour schemes was non-positively perceived by participated young adults. Modern buildings are mainly built with the use of cold colours, and less variation in colour schemes (Pallasmaa, 2007). The buildings on photograph D were again more appreciated due to the brown colour and use of bricks (figure 5.1), instead of white or grey colours. Especially the building on photograph E was mentioned as "colourless", this building has indeed a lack of different colour hues and no variety. The opposite is needed for positive perceived emotions: contrasting colour hues or a great variety of colours (Alexander, 1979; Salingaros, 1997).

In addition, the buildings were perceived as monotonous and repetitive structures. This made the buildings "boring" and "characterless" for participants. The form of a building, the aesthetic value of its architecture, contribute to the character of a place. Place character makes a location unique, distinctive, and shapes its identity (Buttimer & Seamon, 2015). Without these physical elements (aesthetically appealing architecture) a lack of an unique atmosphere and visual appeal cause less 'meaning' to that place, according to Paulsen (2004). In this case, modern architecture in the Netherlands has less 'meaning' perceived by the participants which degrades place identity. Again, photograph D was the most appreciated one of all modern buildings because of a little more differentiation in balconies, colour use, heights between the buildings, and different roofs (figure 5.1).

Lastly, the lack of details and ornamentation were a recurring perceived element among the participants. The modern "static" and "blocky" forms of the buildings created an "impersonal" feeling. The level of details in buildings contributes to the overall aesthetic quality of a structure (Sağlam, 2014). Again, the lack of details degrades place identity.

In this way, the modern buildings of category 2, and the traditional building on photograph B (building in Amsterdam) which was interpreted in line with the buildings of category 2, have less character. The lack of distinctive character produces and reproduces a less prevailing place identity in

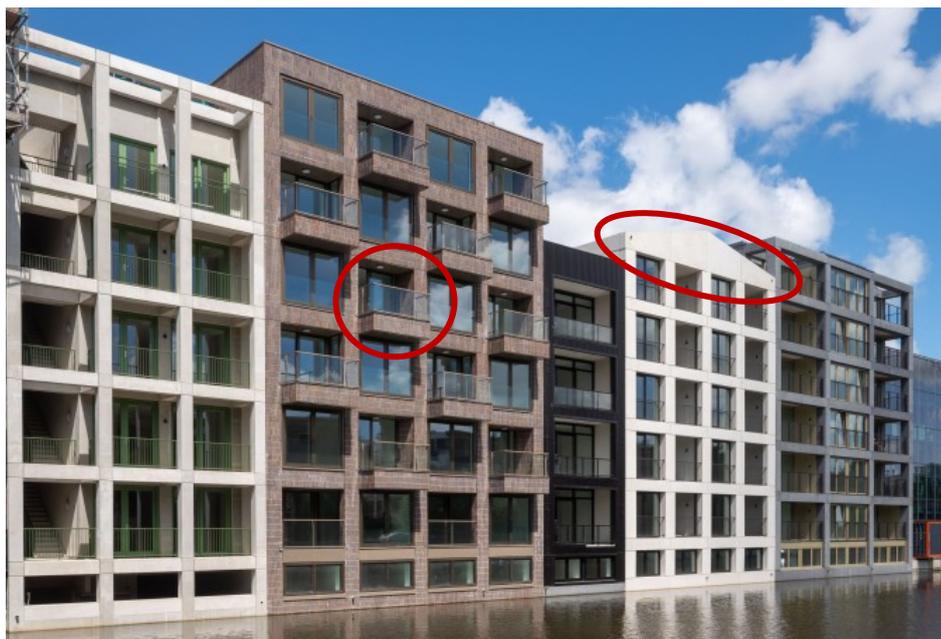


Figure 5.1 Mentioned elements that created variation at modern architecture appreciated by young adults on photograph D.

neighbourhoods where this kind of exterior architecture is dominant. This will be further explained in the section about place identity. The negatively perceived elements are in line with previous research on aesthetics in exterior architecture. Closely related research in Sweden (Granström & Wahlström, 2017), where laymen did not satisfy the identified preferences concerning exterior architecture of contemporary buildings showed similar results as the participated young adults in the Netherlands. On the other hand, the modern buildings were identified as the “international parts of the Netherlands”. Modernists try to symbolise power, wealth, and modernity through their architecture (Davis, 2006). The way respondents reacted with “office-like”, and “really modern” endorses the architectural discourse within modernism. Although, young adults in this research do not prefer this kind of exterior architecture to live in.

Detailed and authentic architecture

Contrasting with the simplistic and homogenous perceived buildings, the traditional (except for photograph B) and neotraditional buildings were positively interpreted. Participated young adults prefer to live in a building with “character”, that is “unique”, and feels “homely”. Participants shaped a collective positive interpretation of (neo)traditional architecture in the Netherlands. When it comes to positive perceptions of (neo)traditional exterior architecture, four elements were identified:

First, the smaller scale of the buildings was positively perceived. Traditionalists argue for harmonious and balanced proportions with a human-scale (Scruton, 2013). Buildings with a smaller scale enhance the interaction between the non-human actors (buildings) and the people at street level (Gieryn, 2002). Although this research used photographs, the interaction between people and buildings was more strongly present with (neo)traditional architecture. The participants showed more attachment with the smaller scale of buildings.

Furthermore, the use of warm colour schemes was mentioned as positive. The use of vibrant colours, mainly the warm colours of bricks, is an important element in the appreciation of traditional architecture. The literature already shows the importance of colour when it comes to exterior architecture, especially warm colours and variety in schemes (Minah, 2008; Salingaros, 1997). Traditionalists advocate for the use of warm colours, based on these theories (Salingaros, 1997). Participated young adults preferred the use of bricks, which created more “character”.

In addition, rich use of ornamentation is an element that was appreciated by the participants. It was seen as a well-thought element which makes the exterior architecture unique. Participants found it important that a building does not come across as a standard kit, ornamentation enriches the exterior of a building. This is one of the key elements in the philosophy of aesthetics in exterior architecture, as well as the traditionalists approach (Ashraf & Sinha, 2023; Kostof, 1995). The craftsmanship of ornamentation generally enriches the experience by perceivers and creates more character to a place with its distinctive appearance. This is in line with the perceptions of traditional architecture by participated young adults. However, some respondents found it a bit too much ornamentation, which they still perceived as beautiful, but not to live in it themselves.

Lastly, the variation between the buildings which made them distinguishable from other dwellings was positively mentioned. Participants see their dwelling as part of their identity, in which they create their own space to make it “feel like home”. The uniqueness of a building’s exterior architecture strengthens the feeling of having your own place. A way to distinguish from other dwellings and therefore identities and personalities. Variation between dwellings provides an important element in the aesthetic qualities of a building according to the participants, which is mainly visible in traditional architecture. Although, the variation between buildings is not a recurring element in the philosophy of exterior architecture. The use of different colours and ornamentation, which characterise traditional architecture, make the buildings unique and varied (Oliver, 1998; Rapoport, 1990). Figure 5.2 and 5.3 show elements that create variation and uniqueness of a building according to the participants. Such as, small details as differentiation with front doors, small constructional extensions, white ornamentation, and variation in brick use. However, forming a cohesive whole within a neighbourhood or street is still aesthetically important. Which makes variation only acceptable within a given framework. For example, photograph A (figure 5.3) was sometimes perceived as too unique.



Figure 5.2 Elements of variation and differentiation that was appreciated by young adults on photograph G.



Figure 5.3 Elements of variation, differentiation, and ornamentation that was appreciated by young adults on photograph A.

All these elements are the opposite of the negatively interpreted elements of the modern buildings. This is in line with studies by Krier (1998) and Scruton (2013) who advocate for more neotraditional architecture, specifically by using a scale that fits the environment, ornamentation, and creating a 'personal' structure by engaging with the human experience. In the production of place identity the interaction between non-human actors (place) and people is essential (Peng et al., 2020). According to the respondents, this interaction occurs with the detailed and authentic buildings. Furthermore,

studies show that these traditional forms of exterior architecture provide cultural continuity by preserving the historical context and shape of the urban character (W. Al-Hinkawi & Al-Saadawi, 2019; Krier, 1998; Paulsen, 2004). Participated young adults in the Netherlands saw this cultural continuity as well. They found the (neo)traditional buildings “typically” Dutch and were reminiscent of the Netherlands when seeing this type of buildings. As countermovements suggest, buildings with traditional characteristics strengthen the local identity through exterior architecture. Neighbourhoods in neotraditional architecture form a more cohesive whole with the pre-existing city, with less contrasts. The buildings respond sensitively to their context, forming an external unity, which is a recurring aesthetic element of architecture (Gehl, 2010), additionally appointed by participants.

Smaller buildings, with roots in local Dutch culture, enhance place identity. Participants saw aligned with the literature the newly built dwellings in neotraditional form as cultural continuity. Participants were highly positive about neotraditional buildings. They preferred the elements of traditional building methods, with a lot of ornaments, brick use, and variation. As well as the practical benefits of sustainability measurements were perceived as a major advantage. This did not occur in the literature about (neo)traditional forms but was an important consideration in preferring the third category (neotraditional architecture). The combination of traditional exterior architecture and benefits of newly built buildings makes neotraditional architecture a very potential addition to the housing stock. Participants prefer the conveniences of contemporary buildings, which make neotraditional architecture more suitable for the building impulse than traditional or modern architecture.

Place identity

Ramos et al. (2016) and Ali et al. (2022) examined multiple studies about the interaction between architecture and people, resulting in place identity: the people’s personal and collective perceived and constructed identity of a place with (in)tangible characteristics, meanings, and values, which makes a place distinctive and unique from other places. This interaction between tangible non-human and human actors is essential for the production and reproduction of place identity. According to previous studies, buildings with character are essential for the production of place identity, in order to strengthen this local identity. A lack of character, or place identity, implies a lack of stimuli (Norberg-Schulz, 1988). Modern architecture was perceived as monotony within this research. It offers very little surprises and discoveries in exterior architecture, this aligns with the founding’s by Norberg-Schulz (1980). Place identity is a recurring substantiation for traditionalists. They believe that using architectural traditions associated with the culture of the community in a place that is identical to a region, enhances a strong place identity with unique characteristics. Which makes that particular place distinct from other places in the world. Since neotraditional buildings in the Netherlands use these transmitted traditions of building, participated young adults connect this way of building with a stronger place identity. Especially compared to the modern architectural forms, which were interpreted as “monotonous” and “general”. This endorses another substantiation for the countermovements, using buildings to counteract the homogenisation of architecture. In this research a stronger place identity was perceived with the (neo)traditional buildings. However, modern architecture produces a place identity as well, but in a more homogenous and globally oriented way. As stated by Davis (2006), the purpose of modern buildings is to symbolise modernity and power. Thus, traditional Dutch architecture is perceived by participated young adults as a way for cultural continuity in which buildings form a cohesive whole with the transmitted local culture. Modern Dutch architecture is perceived by participants as a way to symbolise global orientation and power. The perceptions connected to both approaches are in line with the determinations of both approaches in exterior architecture, outlined in previous studies.

Influence urban memory and attachment to dwelling

As the results show, participants mentioned places, memories, and similar buildings from events in their daily life. These varied descriptions of reminiscences shape the identity of the buildings and its place. Goss (1988) found that interactions within the public realm, between material constitution and structuration of social life, are reproduced by human actors. Additionally, Gieryn (2002) found that exterior architecture cannot be seen as static entity. These buildings are constantly subject to reinterpretation, narration, and representation, which influences the meanings and stories associated with a place. In this research, the perceived buildings on the photographs during the PEIs endorsed the interaction between humans and buildings, and all the memories which produce place identity. This place identity is collectively produced, as well as personal individually. Degen & Rose (2012)

found the importance of the sensorial body, because the senses are part of people's everyday experiences and interactions with the material life of objects. The participants in this research indeed used their senses to describe their feelings, assumptions, and interpretations about certain buildings and exterior architecture. With their urban memory participated young adults tried to get a grip on what they saw and what they thought about it. These results show a strong correlation with the previously mentioned studies. The embodied sensorial experiences of physical elements in the public realm are important by producing and reproducing a place identity with a unique character. However, these urban memories did not result in a different perspective or appreciation of the exterior architecture. Positive urban memories did not necessarily result in positive descriptions of the visible buildings on the photographs. The other way around, negative urban memories, result more often in a negative appreciation of the exterior architecture of buildings. Thus, the interaction between exterior architecture and the sensorial experience of daily life does not always shape the appreciation of participants about buildings. The involved urban memories can be seen as static regarding the preferences of architecture. Although, these urban memories still occur and form the identity of a place.

When it comes to the attachment to a dwelling, memories and sensorial experiences have a major influence. Participants, as shown in the results, feel a strong attachment to their parental home even after living since years in their own dwelling. The participant's memories and feelings connected to their parental home are very strongly present. The place participants grew up, with all the mentioned memories, created great sentiment to the dwelling. Something that is hard to find with later dwellings in their adult life. Again, the importance of urban memory is endorsed. However, the exterior architecture of these important homes has hardly any influence on the attachment with a dwelling. The way a home looks does not appear to be important in bonding with their parental home, but it does matter when selecting a dwelling of their own. A contradiction that respondents found difficult to explain. Furthermore, the exterior architecture of their parental home has no influence on the appreciation of other buildings. In this way, exterior architecture is crucial in the interaction with humans by producing place identity, and an element in urban memory since human memory is spatial (Hebbert, 2005). However, the attachment to a dwelling and the appreciation of exterior architecture seems to be different concepts that do not affect each other.

Impact of housing crisis

The housing crisis in the Netherlands has a clear influence on the way participated young adults select a dwelling. The modern high-rise buildings produced to accommodate as many residents as possible is not favoured. However, participants do not rule out living in a property like this but prefer a smaller-scale building. This nuance in their answering shows that they consider occupying an apartment in a high rise building to find (affordable) housing in the future, or to show understanding for people who have no choice than living in a dwelling like that. In this way, the housing crisis influences the valuation of buildings by participated young adults. They simply cannot form strong opinions about exterior architecture, because the current situation does not allow such preferences. Participated young adults are already pleased when they found a place to live in, exterior architecture is a less important factor. Whereas housing is essential for providing opportunities, creating a positive sense of self, and providing stability and security (Bratt, 2002). Nevertheless, this research found that participants certainly do have opinions and preferences when it comes to exterior architecture. If they can let go of the financial situation and scarcity in the housing market, preferences emerge strongly. (Neo)traditional forms of architecture, as stated in previous sections, are preferred. In this way, the housing crisis results in a reduction of aesthetically valued housing. The production of more simplistic and homogenous housing, as interpreted by the participants, is strongly connected to a lack of place identity due to less local cultural continuity. The modern "mass production" and "straightforward" architecture created a negative sentiment about the future cityscape. The participated young adults perceived less place character with modern architecture, for instance by calling it "copy-paste" architecture. It shows how critical the housing crisis is related to exterior architecture. As well as for young adults, who find it hard to find a dwelling for their own which enhance their well-being. As shown by Ali et al (2022), the interactions and connections between people and buildings that shape place identity form a collective and personal being and belonging to that place. The participants felt less belonging to a place with modern exterior architecture since they perceived it in a negative way. This aligns with previous studies which found that homogeneous places can lead to feeling anonymous and having a negative relationship to that place (Watson, 2019). In addition, Mezhenna & Filippova (2020)

found that modern architecture can lead to stress and negativity for the viewers. Participants within this research perceived these modern homogeneous urban developments necessary as temporary solution for the current housing crisis, but not aesthetically wanted or preferred. This shows the frictions between exterior architecture produced by the housing crisis and how it affects the preferences of participants and their well-being.

5.2 Limitations

First, the sample size of 15 participants is not enough to make conclusions of the population (young adults living in the Netherlands) as a whole. Although, making generalisations was not the intention of this research. The results can be seen as initial insights into thought patterns of young adults.

Additionally, during the interviews of this research the focus could have been more generally on the role that exterior architecture plays on young adults, before going in depth by talking about the photographs. More questions regarding the housing crisis, preferred architectural styles, and creating place identity could have strengthened this research. These questions would not be affected by the theory driven photographs, as it would be asked before. In that case, it would be easier to connect the theoretical frameworks of place identity and the housing crisis with the results conducted during the interviews. Although, it is not that these topics were incomplete and under-researched, but it could have resulted in a deeper understanding of some considerations.

Furthermore, some limitations when it comes to the selection of the photographs used during the PEIs occurred. The unity within category 1 (traditional architecture) was not strongly visible. Photograph B (traditional building in Amsterdam), which had less ornamentation and detailing than the other photographs of that same category. The criterion of 'level of details: high level of details with ornamentation' was not correctly selected for photograph B. Participants thought that the building was newly built, found it "monotonous", "crammed", and rather classified it under the modern architecture of category 2. This made the comparison between the categories less clear, some participants preferred category 3 (neotraditional architecture) over category 1 (traditional architecture) due to the less appreciated building on photograph B. The selection of a building that meets the criteria for traditional buildings could have resulted in different outcomes. However, it has also resulted in the insights that older buildings are not necessarily valued. Especially when they have a lack of ornamentation and character, as situated in photograph B.

Besides that, selecting only three architectural categories, with major contradictions, could have influenced participants' answering. It created the perception that these forms of exterior architecture are the only possibilities. There are countless ways and details in exterior architecture beyond these three categories, which were not mentioned during the PEIs. The preferences by participants should therefore be seen in relation to the applied architectural forms, not in relation to architectural forms which are outside the scope of this study.

Interpretation of architectural styles and societal debates may involve subjective judgement. Different stakeholders (e.g., residents, architects, policymakers) may have diverse perspectives which were not fully represented. This research could have broadened with multiple stakeholders of exterior architecture. This could have made the research more inclusive with the substantiation of other perspectives. For example, the reasoning for architectural choices architects make could bring a more diverse understanding of the produced buildings during the housing crisis.

Some questions applied during the PEIs could have been asked differently in retrospect. When asked if the participant associates a certain kind of building with personal experiences or events (Q13, Q22, Q31), resulted logically on memories that the participant has. Whereas without the question, this might not have happened. Memories were mainly named by the participants since they were asked about urban memories. The validity of these responses can be questioned. On the other hand, urban memory was not the main subject within this research, it occurred during thematic analysis. Besides that, some participants found it hard to explain how they perceive particular elements of architecture and their feelings related to it. This is in line with the limitations in previous research (Meo, 2010), in which some participants hamper communication despite questioning. This method forced participants to think about subjects they normally do not think about. Which created that participants could not always substantiate why they felt something. Their preference did not always had a clear

reasoning. In this case, photographs did not prompt stories during every interview. In some cases this resulted in less in-depth answering than hoped at forehand. This is in contrast with previous research (Harper, 2002). The use of photo elicitation interviews helped providing visual stimuli, but a critical notion is that this method is not a silver bullet. Questioning and an active interview attitude are essential.

All in all, this research focused on gathering insights to draft recommendations for policymakers and urban planners regarding exterior architecture. This qualitative research did not aim to draw conclusions from an entire population. The 15 PEIs provided valuable insights of how young adults in the Netherlands could think, what they pay attention to, and what they consider important when it comes to exterior architecture. The preferences of participated young adults were used to draft recommendations, which is further outlined in the following section.

5.3 Policy recommendations

The results from PEIs with young adults currently living in the Netherlands can be translated into policy recommendations for policymakers, architects, and urban planners. First, three recommendations regarding the role of housing, architecture, and place identity are stated. Moreover, another three recommendations are focused on exterior architecture, and how these preferred forms by participated young adults in the Netherlands can leverage from the housing crisis and the current construction impulse.

First, the construction impulse could be beneficial by building in a way the end-users, in this case young adults in the Netherlands, prefer as aesthetically appealing. As previous research by Granström & Wahlström (2017) and Sternudd (2007) showed, the gap between aesthetics in the architectural discourse and by laymen are immense. These contrasting preferences should converge in order to strengthen the exterior architecture and its cityscape. Currently, architects have control of the produced buildings (Skclair, 2017). Resulting in tensions between architecture, economic forces, and the local cultural identity of the existing city (Castree et al., 2013; Harvey, 1989; Herrle et al., 2008; Sassen, 1991). When preferences of end-users are taken into account, by drawing up architectural requirements, these tensions could be limited. Policymakers, as stakeholders in urban developments, have the responsibility to preserve the aesthetic value of buildings in the city and reduce the dominant influence of developers and architects. The results show that the participated young adults do not see current urban developments in modernist style as adding aesthetic value to the city. An indicator that policymakers should play a greater role in exterior architecture.

In extent of this, it is recommended to policymakers and urban planners to broaden their influence on exterior architecture. Currently too much focus is on providing housing for as many people as possible to 'solve' the housing shortage in the Netherlands. This short-term thinking may result in less thoughtful plans. Is the impact of exterior architecture properly considered? Does it sufficiently connect with buildings in the surrounding area and local place identity? Participants saw modern architecture as simple buildings to produce as much and as fast housing as possible. If policymakers take more account of long-term impact manufactured buildings could make a greater contribution to the city. Granström & Wahlström (2017) argue that produced dwellings during the housing crises could be done in an aesthetically appealing way as well as in a fast and efficient way.

Furthermore, exterior architecture is a crucial element in the production of place identity. It is recommended to build with vernacular building methods. A way of building that is in line with the pre-existing city, but as well to enhance the local culture. By using methods of building rooted in its social and cultural context, the place identity of that city will be reinforced. This is important to limit forces that produce homogenous buildings, forces that do not propagate local techniques, styles, and culture. Besides that, traditional characteristics reinforces the attachment to a place, people's well-being, and uniqueness of buildings (Bratt, 2002; Herrle et al., 2008). Especially newly built traditional buildings can be applied as a win-win solution by creating aesthetically appealing places with its exterior architecture and by accommodating people in buildings with conveniences of contemporary building. Traditional architecture can be an important factor to create a place with character, strengthen its place identity. Participants prefer the aesthetics that enhance this cultural continuity as well. Besides that, vernacular building creates a cohesive whole within the city's architecture. Buildings that reinforce each other (traditional architecture) rather than compete (modern architecture) to enhance the

cityscape. Something that is appreciated by participants, and stated in literature as an aesthetic quality as well (Bachman, 2003; Gehl, 2010; Oliver, 1998).

When it comes to specific elements in exterior architecture, three aesthetic qualities are recommended to implement in order to meet the preferences of young adults and to leverage from the current housing crisis in the Netherlands. First, the use of variation between buildings, but in a cohesive whole is a key element. Buildings with different colours, detailing, brick patterns, materiality, forms and ornamentation create more unique dwellings. By implementation of differentiation, participating young adults appreciated that architects made more effort to design an individual dwelling. In this way, a dwelling can be distinguished with its uniqueness and a certain emotional value can be added. The use of ornamentation, an effective way to create variation, adds more authenticity to a dwelling. Making variation one of the most preferred aesthetic qualities of (neo)traditional architecture, an important recommendation for future developments. Furthermore, materiality is a recurring aesthetic element in preferred buildings, especially brick use and warm colour schemes. By using these materials, in line with vernacular building methods, new developments could form a cohesive whole with the pre-existing city, something that was appreciated by participated young adults. Lastly, build with a small scale. A 'human-scale' is the most appreciated building size, in order to create a more homely and personal dwelling.

6. Conclusions

In this research an attempt was made to answer the following question: 'how does exterior architecture in the context of the housing crisis in the Netherlands influence the identity of a place, and how do young adults living in the Netherlands perceive the architectural form of new urban developments?' In order to do so, the qualitative method of theory driven photo elicitation interviews with young adults currently living in the Netherlands was executed. The aim of this research was to draw recommendations for Dutch urban planners and policymakers to leverage from the housing shortage with preferred exterior architecture which fosters the identity of place.

The results, in combination with previous research, show that exterior architecture is a subjective entity with varied opinions, assumptions, and experiences. However, it plays a substantial role in shaping perceptions about a dwelling, influencing how people feel and behave, consciously and subconsciously. The interaction between buildings, its exterior architecture, and people (Peng et al., 2020) is strongly endorsed. This interaction produces place identity, constructed with personal and collective perceived characteristics, values, and meanings which makes a place distinctive and unique (Ramos et al., 2016). This research showed that (neo)traditional forms of architecture resulted positively on perceived place identity, on the contrary with modern forms of architecture, which resulted negatively on perceived place identity. This shows that the vague and diverse interpretation of exterior architecture results in a collective place identity, positively or negatively.

The housing crisis in the Netherlands has led to a proliferation of modern urban developments, which were negatively perceived by participated young adults as "mass produced" dwellings without character. This approach in architecture was certainly not preferred by participants. Consequently, the housing crisis results in the production of buildings with a negative influence on its place identity, without cultural continuity, and creates a situation in which young adults cannot form opinions about exterior architecture due to scarcity in housing. This means that young adults could not meet their preferences in exterior architecture, and the current production of housing, mainly by adopting the modernists approach, does not improve this aesthetic preference gap. This gap shows the difference in preferred exterior architecture between architects and participated young adults in the Netherlands. Previous research by Granström & Wahlström (2017) showed that the production of housing during a crisis could be done in an aesthetically appealing way; an approach to leverage from the housing crisis, with the use of neotraditional buildings methods.

Both architectural approaches, (neo)traditional and modern exterior architecture, were perceived by participated young adults in line with previous studies (Olssen, 2020; Paulsen, 2004; Scruton, 2013; Sklair, 2017). This research found a dichotomy in perceived exterior architecture, simplistic and homogenous, and detailed and authentic. (Neo)traditional Dutch architecture was positively perceived due to ornamentation, warm colour schemes, brick use, a smaller scale, historical references, and variation between the dwellings. According to the results, these vernacular architectural methods highlighted the importance of architectural authenticity and cultural heritage in shaping individuals' preferences for exterior architecture and their overall perception of the urban environment. By contrast, modern architecture was negatively perceived due to large scale, cold and monotonous colour schemes, repetitive and blocky forms, and the lack of detailing and ornamentation. After all, exterior architecture did not influence the attachment to a dwelling, participants refer to urban memories unrelated to perceived values of exterior architecture. However, exterior architecture is an important factor of well-being and to feel proud of a home, more strongly linked with owner-occupied dwellings than with rented dwellings.

In conclusion, this research delved into the relation between exterior architecture, the housing crisis in the Netherlands, and place identity, connected to the perceived architectural forms of (neo)traditional and modern architecture by young adults. The results endorsed the impact of buildings and its exterior architectural design on an individual's sense of place identity, resonating positively with (neo)traditional forms of architecture. Participants appreciate the ornamentation, materiality, warm colour schemes, a smaller scale, historical references, and variation between the dwellings. In contrast with the negatively perceived modernists approach as mass production, monotonous forms and a lack of detailing. Dwellings produced during the building impulse should be of added value to the place. Instead of focussing on quantity, the quality of exterior architecture may play a greater role. This study

highlighted the importance of aligning housing developments with the preferences of residents in exterior architecture to create a stronger place identity that forms a cohesive whole with local culture. The housing crisis, as a producer of the modern developments, could be used to leverage from to enhance the quality of exterior architecture in new urban developments in the Netherlands. Neotraditional housing could be used with conveniences of contemporary building methods and preferred aesthetic qualities.

Further research could focus on a more diverse population to get insights of the preferences in exterior architecture with a broader variety of personal characteristics. This could enhance exterior architecture that meets every generation or societal group. This comparative analysis could compare the perceptions of different age groups, socio-economic status, and cultural demographics towards exterior architecture to identify potential variations in preferences and values. A greater sample size within these populations, as well for young adults, could create generalisations of these preferences in exterior architecture, for instance by using a survey. This could result in more inclusive results. Besides that, more in depth case studies could enhance the understanding of how individuals relate and connect to a neighbourhood with certain exterior architectural styles. The multifaceted relationships between architectural design, social dynamics, and place identity could be further explored in the actual place. Finally, a more pragmatic approach could be applied in which various stakeholders could be involved, such as architects, policy makers, developers, and urban planners, to understand their considerations when it comes to exterior architecture. By involving more stakeholders decisive policies could close the gap between preferences of these different stakeholders and end-users. Further research could advance knowledge of the complex interplay between exterior architecture, the housing crisis, and place identity, leading to more informed decision-making in urban planning and design practices.

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Appendices

A. Interview outline

This annex outlines the semi structured photo elicitation interviews, structured with the topic list, question list and the used photograph.

A.1 Topic list

- Attachment to dwelling
 - o Indicators for dwelling attachment
 - o Personal experiences
- Exterior architecture
 - o Importance by selection
 - o Indicators for exterior elements
- Traditional architecture
 - o Urban memories
 - o Positive elements
 - o Negative elements
 - o Personal preferences
 - o Cultural continuity
- Modern architecture
 - o Urban memories
 - o Positive elements
 - o Negative elements
 - o Personal preferences
 - o Cultural continuity
- Neotraditional architecture
 - o Urban memory
 - o Positive elements
 - o Negative elements
 - o Personal preferences
 - o Cultural continuity
- Dwelling character
 - o Personal definition
 - o Indicators for dwelling character

A.2 Before hand

- Do you feel comfortable in this setting?
- You can answer whatever you want, there are no good or wrong answers. When you do not feel comfortable answering a question you do not have to answer it.
- Think out loud, just tell me whatever you think of, share memories, tell anecdotes, or how you feel about some aspects. Everything you share with me is useful.
- Can I record the interview to transcribe this later on? I'll delete this voice memo after I used it for my research.
- This research is about three architectural categories. I will show some pictures of developments within these categories to conduct in-sights of how you interpret and feel about these styles. The context (location, neighbourhood, type of dwelling, etcetera) of the dwellings shown on the photographs are omitted, only the visible parts (exterior architecture) on the photos are important to discuss.
- Difficulties such as financial situation, personal opportunities, backgrounds, etcetera can also be omitted in this interview.
- Finally, for the voice recording it is important to mention the letter corresponding with the photograph when you talk about it.

A.3 Personal characteristics

Q1: What is your age?

Q2: What is your gender?

Q3: What is your educational level?

Q4: What is your place of birth?

Q5: In what kind of situation do you live right now, and where is this?

Q6: Can you explain your dwelling history?

A.4 Architecture in general

Q7: In what way do you connect with dwellings and their exterior architecture?

Q8: Is the way a dwelling looks from the outside important by selecting a home? Can you explain this?

A.5 Traditional architecture

Photograph A: situated in *Stadscentrum* (Nijmegen), built in 1892 (BAG, 2024).

Photograph B: situated in *De Pijp* (Amsterdam), built in 1877 (BAG, 2024).

Photograph C: situated in *Binnenstad* (Utrecht), built in 1450 (BAG, 2024).

Q9: What comes to mind when you see these buildings? / How would you describe this category in a couple words?

Q10: Can you describe what you see on these photographs?

Q11: What are your feelings about what you just described?

Q12: Does this type of architecture reminds you of other places?

Q13: Do you associate this kind of buildings to personal experiences or other events?

Q14: Which elements of these buildings do you like?

Q15: Which elements of these buildings do you dislike?

Q16: Would you like to live in a building like this according to what you can see on this photo, and why?

Q17: Does this architecture remind you of the Netherlands, and why?



Figure A.1 Photograph A, situated in *Stadscentrum*, Nijmegen (Google Maps, 2023).



Figure A.2 Photograph B, situated in *De Pijp*, Amsterdam (Google Maps, 2020).



Figure A.3 Photograph C, situated in Binnenstad, Utrecht (Google Maps, 2017).

A.6 Modern architecture

Photograph D: situated in *Oostenburg* (Amsterdam), built in 2022 (VORM, 2024).

Photograph E: situated in *Strijp S* (Eindhoven), built in 2022 (SDK, 2024).

Photograph F: situated in *Maritiem District* (Rotterdam), built in 2019 (NVM, 2024).

Q18: What comes to mind when you see these buildings? / How would you describe this category in a couple words?

Q19: Can you describe what you see on these photographs?

Q20: What are your feelings about what you just described?

Q21: Does this type of architecture reminds you of other places?

Q22: Do you associate this kind of buildings to personal experiences or other events?

Q23: Which elements of these buildings do you like?

Q24: Which elements of these buildings do you dislike?

Q25: Would you like to live in a building like this according to what you can see on this photo, and why?

Q26: Does this architecture remind you of the Netherlands, and why?



Figure A.4 Photograph D, situated in Oostenburg, Amsterdam (VORM, 2024).



Figure A.5 Photograph E, situated in Strijp S, Eindhoven (Google Maps, 2023).



Figure A.6 Photograph F, situated in Maritiem District, Rotterdam (Google Maps, 2023).

A.7 Neotraditional architecture

Photograph G: situated in *Kralingen* (Rotterdam), built in 2016 (BTR, 2016).

Photograph H: situated in *Brandevoort* (Helmond), built in 2001 (BAG, 2024).

Photograph I: situated in *Koningsdaal* (Nijmegen), built in 2017 (BAG, 2024).

Q27: What comes to mind when you see these buildings? / How would you describe this category in a couple words?

Q28: Can you describe what you see on these photographs?

Q29: What are your feelings about what you just described?

Q30: Does this type of architecture reminds you of other places?

Q31: Do you associate this kind of buildings to personal experiences or other events?

Q32: Which elements of these buildings do you like?

Q33: Which elements of these buildings do you dislike?

Q34: Would you like to live in a building like this according to what you can see on this photo, and why?

Q35: Does this architecture remind you of the Netherlands, and why?



Figure A.7 Photograph G, situated in Kralingen, Rotterdam (BTR, 2016).



Figure A.8 Photograph H, situated in Brandevoort, Helmond (Google Maps, 2017).



Figure A.9 Photograph I, situated in Koningsdaal, Nijmegen (Google Maps, 2022).

A.8 Comparing architectural categories

Q36: Can you describe some differences between these categories?

Q37: Do you see a correlation per category?

Category 1 shows some Dutch samples of traditional architecture from before WW2. Category 2 shows some Dutch samples of modernism, made after 2000. The last category shows Dutch samples with traditional characteristics, but made after 2000, the so-called neotraditional style.

- Q38: Does this change your opinion/what you described about the third category?
Q39: In which architectural category do you prefer to live in, and why?
Q40: Can you order the architectural categories from most likeable to least likable?
Q41: Why did you order the categories in this way?
Q42: Which category has the most character in your opinion? And why?

A.9 Follow-up questions

- Why is that?
- Which elements are important for what you just told me?
- What do you think of this category compared to the previous one?
- How is the situation in photograph X about what you just told me?

B. Messages data collection

This annex consists of the messages sent to (potential) participants during the recruitment. The target group is in the Dutch context, so the messages were sent in Dutch.

B.1 Introductory message

Sent to contacts to approach potential participants who met the target group requirements. This is a passive message, because the relevant person had yet to give approval to exchange contact details.

“Goedendag, mijn naam is Bas van Horne en voor mijn master thesis van Urban Geography ben ik opzoek naar participanten. In mijn onderzoek ga ik verschillende architectuurstijlen en de invloed hiervan op de mens analyseren. De interviews zijn gefocust op ‘jongvolwassenen’ met een leeftijd tussen de 18 en 30 jaar. Ik zou het fantastisch vinden als je eind april/mei maximaal een uurtje de tijd hebt om mij verder te helpen. Hier is geen voorkennis of voorbereiding voor nodig. Tijdens het interview zal ik foto’s voorleggen waarnaar een gesprek ontstaat, oftewel op een open, subjectieve en laagdrempelige manier. Hopelijk ben je enthousiast en mag ik je een berichtje sturen met meer info.”

B.2 Appointment message

After approval the following message was sent to set a date for the interview. A location where the participant feels comfortable was very important. The dates differentiated per participant.

“Hi X, Bas hier, X had je nummer doorgestuurd. Wat fijn dat je mij wilt helpen met mijn onderzoek voor m’n master thesis. Voor het interview is geen voorkennis nodig, dus dat maakt het gemakkelijk. Het gesprek zal maximaal een uur in beslag nemen. Aangezien ik 15 interviews ga afnemen zal het even puzzelen zijn, maar wat komt jou het beste uit op de volgende data?

- 24 april (gehele dag)
- 25 april (9.00-15.00 + avond beschikbaar)
- 26 april (gehele dag beschikbaar)
- 29 april (gehele dag + avond beschikbaar)
- 30 april (9.00-15.00 + avond beschikbaar)
- 2 mei (vanaf 12.00 + avond beschikbaar)
- 3 mei (gehele dag beschikbaar)

Aangezien ik gebruik maak van foto’s zal het gesprek fysiek plaats moeten vinden. Wat locatie betreft ben ik flexibel, het liefst in de regio Utrecht en wat voor jou het makkelijkste is. Heb je een voorstel voor tijdstip en locatie? Super bedankt voor het meedenken in ieder geval. Mochten deze data niet uitkomen dan zouden we het ook nog later in mei kunnen laten plaats vinden. Als je nog meer vragen hebt, stel ze gerust.”

Furthermore, there was no online interaction between the researcher and participants when a date was set.

C. NVivo coding analysis

This annex consists of the codes produced during the thematic analysis of the participant's transcripts. Software program NVivo was used to conduct the references and the code tree.

C.1 Open coding

Codes and references after open coding:

Code	Mentioned by # participants	References
Association with negative memory	7	14
Association with past	8	9
Association with positive memory	10	18
Association with the Netherlands	13	26
Housing shortage	9	17
Partly association with the Netherlands	9	11
Working class neighbourhood	6	9
Connected with current dwelling	5	5
Connected with dwelling in general	5	7
Moved a lot	2	2
Technical conditions dwelling	7	11
Proud of dwelling	4	6
External appearance	14	18
Interior dwelling	2	2
Cold dwelling	2	3
Crammed housing	8	15
Does not want to live	6	8
Dwelling without character	4	5
Geometrical forms	4	6
High-rise buildings	10	15
Homogenous	3	3
Modernistic architecture	3	5
Monotonous	9	14
Office-like	3	5
Simplistic dwelling	4	4
Small dwelling	3	3
Straightforward dwelling	4	5
Ugly dwelling	1	1
Neutral about dwelling	5	6
Newly built	2	2
Authentic dwelling	3	5
Balconies	2	3
Big windows	4	5
Brick use	4	8
Detailing	11	14
Dwelling with character	15	29
Facilities surrounding	1	1
Forms whole in urban context	7	9
Greenery	2	2
History of dwelling	4	9
Homely and cosy	12	26
Old dwelling	8	11

Peaceful	3	5
Private outdoor space	4	4
Scale of building	6	7
Social cohesion	2	2
Spatial	2	3
Variation	10	25
Vibrant colour use	8	14
Wants to live	11	21
Wealthy appearance	4	7
Positively about category 3	12	20
Preferred categories	15	16
Purchase or rental dwelling	2	2

Table C.1 Codes after open coding.

References connected to categories and specific photos:

Case	Mentioned by # participants	References
Category 1 general	10	16
Photograph A	15	42
Photograph B	15	34
Photograph C	14	39
Category 2 general	14	53
Photograph D	10	21
Photograph E	5	12
Photograph F	4	13
Category 3 general	14	37
Photograph G	9	13
Photograph H	5	8
Photograph I	7	9

Table C.2 References per case.

C.2 Axial coding

Hierarchy after axial coding, resulting in five themes:

- Urban memory
 - o Association with working class neighbourhood
 - Cosy, cute and homely
 - People with antisocial behaviour
 - Authentic with ornaments and shutters
 - Dark bricks and use of wood

Note: mainly mentioned with photograph C.
 - o Association with student period
 - Friends lived in similar dwelling
 - Cramped and crowded

Note: mainly mentioned with photograph B.
 - o Associations with high-rise buildings
 - Gathering place for meetings
 - Work is in similar building
 - Acquaintance committed suicide
 - Nuisance from neighbours
 - Zuid-as in Amsterdam

Note: mainly mentioned with photograph E
 - o Associations with similar places
 - Prosperous neighbourhoods countryside

Note: mainly mentioned with photograph A

- Farm and village-like
 - Note: mainly mentioned with photograph C and H
 - Associations with personal memories
 - Where loved ones lived
 - Spare time activities
 - Holiday activities
 - While traveling
 - Former dwellings
- Emotional bond with dwelling
 - Attachment parental home
 - Spacious in countryside
 - Garden
 - Memories from youth
 - Recognisability
 - Attachment current dwelling
 - Friends and others live closely
 - Efforts invested to make it 'your place'
 - Feeling of home
 - Interior architecture
 - Proud of dwelling
 - Spacious
 - Social cohesion with neighbours
 - Less attachment with dwellings
 - Moved a lot
 - Likes trying new things
- Selecting a dwelling
 - Influences of housing crises in architecture
 - Not enough space to accommodate all the people
 - Mass production
 - Fastly built
 - Affects the cityscape
 - Efficiency as leading principle
 - Less focus on aesthetics
 - Note: mainly mentioned with category 2.
 - Influences of housing crises in personal life
 - Less principles to select dwelling
 - Mainly focus on interior architecture
 - Location is leading
 - Dwelling prices affect supply
 - Technical conditions dwelling
 - Double glass
 - Fewest possible defects
 - Sustainability
 - Insulation and energy consumption
 - Costs in maintenance
 - Plot surface
 - Difference between bought and rented dwelling
 - Long term commitment
 - Ownership makes more critical
 - More importance of exterior architecture with ownership
 - Taking into account the desire to have children
 - Spacious
- Architecture as cultural continuity
 - Typical Dutch architecture
 - Use of bricks

- 'Rijwoningen'
 - 'Onder- en bovenwoningen'
 - Small size buildings
 - 'Dakkapel'
 - White coloured ornaments
 - Visible in major Dutch cities

Note: mainly mentioned with category 1 and 3.
 - Recognisable by observations in the Netherlands
 - International orientated parts
 - American style
 - Mainly Randstad
 - More generic architecture

Note: mainly mentioned with category 2.
- Exterior architecture
 - Simplistic and homogenous architecture
 - Static
 - Unpersonal
 - Cold colour schemes and vibe
 - Homogenous
 - Simplistic
 - Functional
 - 'Yuppen' flat
 - Repetitief
 - Dwelling without character
 - Office-like
 - 'Rechttoe rechtaan'
 - Geometrical forms
 - Monotonous
 - Crammed housing
 - High-rise buildings

Note: mainly mentioned with photograph B and category 2
 - Detailed and authentic architecture
 - Peaceful
 - Small scale
 - Wealthy appearance
 - Use of bricks
 - Forms whole with urban context
 - Dwelling with history
 - Use of details
 - Vibrant colour use
 - Variation between dwellings
 - Homely
 - Dwelling with character
 - Cosy

Note: mainly mentioned with photograph A, C, and category 3.