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Green City Branding

–How people respond to the built environment

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Abstract

In the last decades, places such as cities, regions and nations have become active participants in the global competitive economy. They now operate in a global marketplace, competing with other places all over the world for tourists, investors, residents and workforce. As places use marketing strategies and practices to gain reputation and competitive advantage, city branding has become invaluable for cities around the world. Simultaneously, environmental awareness grows, leading to ideas about sustainability also affecting marketing and urban development. These changes are interacting as the number of cities in the world that have taken advantage of their 'green' or sustainable image of the purpose of city branding increases.

According to Stephen R. Kellert, Professor of social ecology at Yale School of Forestry and Environmental Studies, the green movement fails to achieve its goal of sustainability, because it falls short of nurturing the physical and mental benefits that create emotional attachment to place in the first place, and then motivates people to care for constructions and retain them over the long term. There seems to be a gap between the ones who design our living environments and those who use them. This could be related to the fact that residents and visitors of a city are rarely consulted about their preferences. The decision-making regarding exterior architecture falls to municipalities, builders and architects. Something that separates urban design from virtually all other products where companies are actively seeking to satisfy the end user. Further, a housing shortage means that there is a gap between demand and supply and therefore few incitements to create buildings that are perceived as more attractive than others. Within the industry, there seems to be a tendency to create hard products that will meet the functional requirements, where the psychological factors that create added value are overlooked.

The purpose of this study was to create an increased understanding for how cities can use architectural aesthetics as a way of increasing their social, economic and environmental sustainability, and thereby their attractiveness in a global market. A number of aesthetic attributes that affect how an area is perceived was identified with the help of environmental psychology and marketing theory. The study also explores differences between architects and laymen preferences regarding external architecture.

The conclusion is that it is possible to create added value through exterior architecture, and that this added value that could contribute to building an environmentally, socially, economically sustainable society. People´s general taste preferences were identified, and a number of attributes was listed. There were no significant differences between architects and laymen's taste preferences. In general, both architects and laymen appreciate architectural aesthetics containing the identified attributes. However, architects tend to have conceptual or associative references, while laymen in general have visual references. Further, the two groups also have different views on what is authentic and what is not, where architects are more likely to perceive traditional architecture built in the modern age as non-authentic.

Innehållsförteckning

1. Introduction

This chapter will give a brief introduction to the background and the problem that is addressed in this thesis, which then is clarified by a purpose and four research questions. A deeper background can be found in the appendix.

1.1. Background and Research Problem

In the last decades, places such as cities, regions and nations have become active participants in the global competitive economy. They now operate in a global marketplace, competing with other places all over the world for tourists, investors, residents and workforce. (Björner, 2017). As a result, city branding has become invaluable for cities around the world as places use marketing and branding strategies or practices to gain reputation and competitive advantage (Hultman et al, 2016). Simultaneously, environmental awareness grows, leading to ideas about sustainability also affecting marketing and urban development (Bursch & Andeberg, 2015). These changes are interacting as the number of cities in the world that have taken advantage of their 'green' or sustainable image of the purpose of city branding increases (Andersson, 2016).

Citizens are involved in disseminating a positive image of their city, meaning that building a city that is perceived as attractive and pleasant by the citizens is likely to strengthen the city brand and thereby further attract tourists, investors, new residents and workforce. According to previous studies, residents' level of satisfaction with their city or residential area are largely affected by the perceived beauty of the same. A study conducted 2011 in the United States shows that the correlation between an area´s perceived beauty and the populations satisfaction with their area was more important than *all* other attributes (Boys Smith, 2016). A survey by the American analytics and advisory company Gallup conducted in 26 cities between 2008-2010 came to a similar conclusion. A strong connection between an area´s aesthetic attractiveness and the level of satisfied residents was found, which in turn had a clear connection to the growth in GDP. This study found that the areas aesthetics were the third most important factor. The residents even ranked it higher than basic needs such as education, the sense of security, basic services and it turned out to be signicantly more important than demographic characteristics.

According to Stephen R. Kellert (2012), Professor of social ecology at Yale School of Forestry and Environmental Studies, the green movement fails to achieve its goal of sustainability, because it falls short of nurturing the physical and mental benefits that create emotional attachment to place in the first place, and then motivates people to care for constructions and retain them over the long term. Further, studies show that buildings that perceived beauty has positive health benefits, while experienced ugliness has negative health effects. That the simple view of nature´s beauty has positive health benefits has been acknowledged at several occasions, less known is that architecture can affect us in a similar way (Alfvén, 2016) (Sereshine et al., 2017). Variations in architectural character between different places has also been shown to be important. People want places they can identify with and see as "their own" block, street of building (The Prince's foundation, 2014).

Presently, 243 out of 290 municipalities in Sweden are experiencing a housing shortage (Holmström, 2019). Sweden has not faced such a major lack of accommodation since the

Million Homes Programme (Granström & Wahlström, 2017). Even though the Million Homes Programme did succeed in erasing the housing shortage, and replacing it with a housing surplus, the general view concerning the architecture is that it is a monotonous and unattractive environment, that does not encourage physical movement or spontaneous walks (Alfvén, 2016). A similar dissatisfaction be anaesthetised regarding contemporary exterior architecture in newspapers, social media in studies, where new constructions is commonly described as "boring boxes" (Granström & Wahlström, 2017) (Möller & Olsson, 2018).

According to previous research, there is a gap between people within the architecture profession and laymen (Sternudd, 2007). Architects are still influenced by the modernistic ideas that was shaped during the first half of the 2000th century, creating a difference on what architects and laymen find aesthetically appealing in the built environment. As a consequence, architecture that has a more direct appeal to the general public is not included in the architect's repertoire.

Further, residents and visitors of a city are rarely consulted about their preferences (Grossman, 2016). The decision-making regarding exterior architecture falls to municipalities, builders and architects. This separates urban design from virtually all other products where companies are actively seeking to satisfy the end user. Further, a housing shortage means that there is a gap between demand and supply and therefore few incitements to create buildings that are perceived as more attractive than others. Since the demand is greater than the supply, any new constructions is likely to be sold purely because of its function.

In theories of city branding, policy makers must identify attributes that the city holds and use these to create positive values for a large number of stakeholders (Dinnie, 2011). Creativity and openness are important when decision makers choose which attributes that should convey the character of the city. This article examines what aesthetic attributes in the built environment that are perceived as attractive. Through examining these preferences in the aesthetics of built environments decision makers can be given guidance to on how new buildings should be designed to strengthen the city´s brand as a sustainable city.

1.2. Purpose

The purpose of this thesis is to create an increased understanding for how cities can use architecture aesthetics as a way of increasing their social, economic and environmental sustainability, and thereby their attractiveness in a global market.

1.3. Research Question

The **research questions** are as follows:

-Is it possible to create added value through aesthetic design of buildings?

-If so, what attributes are necessary to create this added value?

-Could this potential added value contribute to building an environmentally, socially, economically sustainable society?

-Are there any differences between architects and laymen preferences regarding external architecture?

1.4. Delimitations

The study has been performed within a framework of limitations. A place branding perspective is assumed, where city's or places are considered as brands. Therefore, marketing theory is used, but also literature within environmental psychology.

The main focus of the study is the aesthetics of the built environment, and there are no intentions to treat broader aspects of urban planning or architecture. However, this does not mean a deprecation of social, functional, technical or other aspects of architecture. The study discusses visual impressions, focusing on architectural facades. This is what the chosen theory is about, but it is also what is made possible through the chosen method, which consist of visual impressions in the form of pictures.

The study is limited to five different places in southwest and south Sweden. However, the results have been discussed and analysed in more general terms and should therefore be applicable in a wider context.

2. Theoretical Framework

The theoretical framework that was used in the analysis of the questionnaire result is described in this chapter. Since the main focus of this study is the end-user´s preferences and perceptions of the exterior architecture, the theoretical framework consists of environmental psychology and marketing theory.

The theoretical framework is designed to give an insight on why certain buildings preferred over others. By obtaining theory and previous research from both Environmental Psychology and Marketing, a research model is created as a way of identifying attributes that affect the perceived attractiveness of the built environment. Environmental psychology studies the relationship between humans and the environment, which creates a theoretical basis for understanding why people prefer certain environments over others. The theories of marketing are based on Green City Branding, and includes the concepts of storytelling, authenticity, enchantment, positioning and perceived value.

The research model developed in this chapter is designed to answer the research questions that was presented in relation to the purpose of the thesis. The first part consists of testing different attributes that seem should affect the perceived attractiveness of the built environment. Next, three hypotheses are developed to investigate the relationship between an aesthetically pleasing environment and the three main components of sustainability; social environmental and economic. Further, there is an assumption about general differences between architects and laymen´s taste preferences.

2.1. City branding

City branding, or place branding, means that marketing theory which is originally developed for marketing products is applied on cities or places (Kavaratiz & Ashworth, 2004). City branding has become invaluable as a way for cities around to world to differentiate as competition between different places is growing (Hultman et al, 2016). From this perspective, the city is regarded as a brand. One of the cornerstones of marketing theory is consumer orientation. Thinking about the product, the company and the way to “do business” from the consumer´s viewpoint (Kavaratiz & Ashwort, 2004). When it comes to city branding, consumer´s orientation would have to be how the residents and visitors encounter the city, how they make sense of it, which physical, symbolical or other elements they evaluate in order to make their assessment of the city. People usually interpret their environment through three processes: The first is through planned measurements such as urban design of various kinds: the other through how people interact with sites; and in the third case, through various representations of the site, such as newspapers, articles, films or social media accounts. As explained by Holloway & Hubbard (2001), interaction with places is possible either through direct experiences or through media representations of the site. This information then forms people´s cognitive image and of the place, which ultimately will determine the individual´s general perception of the area. Thus, developing the city´s brand is different ways of influencing these cognitive images that people have of the city.

2.1.1. Green city branding

As the environmental awareness grows, ideas about sustainability has also affected marketing.

Marin-Agilar and Vila-López (2014) suggests that two strategies for improving the city brand are gaining importance: firstly, experiential marketing by arranging "unforgettable experiences" and secondly through green marketing. Sustainable urban development or greening of the city has increasingly been presented as an opportunity for cities (Bursch & Andeberg, 2015). A number of cities has gained international fame for their locally developed and/or implemented environmental policies. As an example, Copenhagen is famous for its local bicycle planning cities, while Freiburg is acknowledged for their solar energy and public transport solutions. Although the general goal of sustainable development is quite precise, namely to address global environmental problems while creating durable development in economic and social terms, there is plenty of room for interpretation of how this can be implemented (Lawhon & Murphy, 2011).

Bursch and Andeberg (2015) has identified tree main approaches in which cities can use green or sustainability issues for place or city branding purposes. These are liveable cities, which means marketing the city as "liveable" and thus attractive for inhabitants, companies and visitors. Second comes knowledgeable cities, which is often associated with green-tech and policy. A third option, which is more recent and more challenging to conceptualise, is low-impact cities. This refers to the framing of the city as having a low impact on the environment.

2.2. Environmental Psychology

Research show that indicate that the environments aesthetical qualities are of great importance for how humans perceive their surroundings. An environment that is perceived as aesthetically attractive will make the visitor feel comfortable and relaxed, while if it is perceived as aesthetically obnoxious could make visitor feel afraid and unsafe (Skantze, 1996). In fact, it has been proven to affect not only our mental but also physical well-being (Svensson & Johansson, 2005). According to a comprehensive study at the British University of Warwick urban architecture that is perceived as beautiful has the same positive impact on our physical and mental health as green parks (Seresinhe et al., 2017).

The field of research that investigates the relationship between humans and the environment is referred to as Environmental psychology. The research is mainly of descriptive character and formulating theories is not the main purpose. There are two main research tracks within the field of environmental psychology, one biological and one cultural. The biological research track understands human beings as an artefact of Darwin´s theory of evolution. As a species, we are influenced by the journey of our ancestors. It is argued that people have multiple subconscious tendencies and behaviours that govern their response to the environment (Sussman & Hollander, 2014). Researchers have also found that the human mind form aesthetical valuations about its surroundings very fast and without reflection, even unconsciously (Zajonc, 1980). A developed theory suggests that the nature of aesthetical experience can be derived from a part of the human brain, the limbic system, which handles our emotions (Smith, 1976). The limbic system reacts positively on colours, rhythm, magnificence, and repeating patterns. While, according to theory, more sophisticated aesthetical valuations take place in the conscious and thoughtful part of the brain.

The cultural track on the other hand, argues that certain type of environmental aesthetics is determined by the society and the individuals. Aesthetical preferences are seen as a product of individual´s valuations and attitudes, which in turn are culturally formed and therefore can vary strongly over time. General common preferences could be expected if the study is conducted in a group with similar cultural background, socioeconomic factors and educational

level. However, research of aesthetical valuation of the built environment between different population groups shows that people, despite different origin, have similar aesthetical preferences (Stamps, 1999). These studies can however only be related to Western countries, since they have been conducted in North America and Europe.

2.2.1. Human senses are not equal

The human species have five basic senses that send information to the brain to help us understand and perceive the world around us. These are sight hearing, smell, taste and touch. However, it is important to understand that they do not carry equal weigh in our perceptual apparatus (Sussman & Hollander, 2014). According to neuroscientist and Nobel prize winner Eric Kandel (2012), our brain works hardest at creating our visual view or our surroundings. In fact, half of the sensory information going to our brain is visual.

Further, how we perceive and understand the world around us steer our behaviour. As described by Sussman and Ward (2017), fixations drive exploration. This means that unconscious hidden habits, such as where our eyes "fixate" without conscious input, determines where our attention goes as these in turn direct conscious activity and behaviour. In other words, what direction we move is partly affected by where our gaze and thereby our attention is directed. According to previous studies, people ignore blank facades, while they are drawn to buildings punched windows or symmetrical areas with high contrast.

2.3. Beauty as a tool of sustainability

Sustainable development is defined as *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* (Forsman & Jonsson, 2016). In 2015, a number of 16 Sustainable Development Goals (SDGs) were set by the international community as part of the UN 2030 Agenda for Sustainable Development. The 11th Sustainable Development Goal (SDG11) is called "Sustainable cities and communities" and aims at addressing the challenges brought by urbanisation and making sure cities are inclusive, green, safe and managed sustainably.

The concept of sustainability is considered to have three main components; social, environmental and economic. Working on the sustainability problem as a whole, means including all three pillars. Based on previous research, satisfying people's general aesthetic preferences in the built environment could be related to all three components.

2.3.1. Social (People)

As mentioned earlier, environmental psychology shows that aesthetics affects our emotional state, where perceived beauty or ugliness can affect not only our mental but also our physical well-being (Svensson & Johansson, 2005) (Alfvén, 2016) (Seresinhe et al., 2017). Further, the general view concerning the architecture of the Million Homes Program is that is it monotonous and unattractive environment, that does not encourage physical movement or spontaneous walks, something that further affects our physical and mental well-being (Alfvén, 2016). This could be related to the 3rd Sustainable Development Goal (SDG3) of the 17 Sustainable Development Goals (SDGs) set by the UN. A goal which is called "Good health and well-being" and aims at globally improving everyone´s health and well-being in the world, no matter their level of income, age, race, gender etc. In this study, there will be examined whether there is a correlation between perceived beauty of an area and people's willingness to take a stroll in that area.

Hypothesis 1: There is a positive relationship between perceived beauty and people´s willingness to take a stroll in the area.

2.3.2. Environment (Planet)

According to Kellert (2012), the green movement fails to achieve its goal of sustainability, because it falls short of nurturing the physical and mental benefits that create emotional attachment to place in the first place, and then motivates people to care for their constructions and retain them over the long term. The idea is that people are more willing to retain, care for and find new areas of use for a building that they find beautiful and are emotionally attached to, while buildings that are perceived as ugly are more likely to be torn down and replaced, where the latter further increases the environmental impact of the construction industry.

Hypothesis 2: There is a positive relationship between perceived beauty and people´s willingness to preserve a building.

2.3.3. Economic (Profit)

In 2017, Granström and Wahlström examined people´s general preferences when it comes to architectural aesthetics and the possibilities to introduce them into new construction. The attributes identified during their work were largely the same as those that will be used in this study, except the antonyms a local or global expression. During their study, they cooperated with the Swedish construction company Skanska, and no one at that company believed that new buildings including these identified preferences would be more expensive than what is built today. It was believed that the real obstacle to introducing the identified attributes was not financial constraint but that the problem rather was related to individuals or processes, offering room for improvement.

This is also supported by other studies. Traditional style generally contains all of the attributes that are preferred by laymen (Granström & Wahlström, 2017) and same year, production costs for different architectural styles were investigated in the Dutch housing market, with the conclusion that it should not be any more expensive to produce traditional, or so-called neo-traditional, buildings than “contemporary” or modernistic buildings. They were not able to identify any differences in construction costs between different architectural styles (Buitelaar & Shilder, 2017). However, the company was able to sell the houses built with traditional architecture for a higher price. According to Buitelaar and Shilder, this could be explained by the fact that there is a gap between supply and demand, as traditional styles are highly popular but rather rare when it comes to new development. However, it should be added that higher costs could be justified if it contributes to a higher value for the project. A recent study in Stockholm shows that people prefer to live in buildings built previous to the breakthrough of are willing modernistic architecture and are willing to pay about 40% higher price apartments compared to apartments in buildings built after the paradigm shift (Hellekant, 2019).

Hypothesis 3: There is a positive relationship between perceived beauty and people´s willingness to live in the area.

2.4. Differences between architects and laymen

Even though people generally have similar aesthetic preferences in the built environment, there is one group that distinguishes itself from the rest. According to previous studies, there is a general difference between how professional architects and laymen value architecture

(Ataöv, 1998) (Sternudd, 2007). The differences that have been found are summarized in Table 1.

It should be said that architects could appreciate the same type of buildings that laymen generally prefer. In fact, architects generally prefer to live in historical buildings (Nyström, 2002). According to a study done by the Swedish trade publication Arkitekten, about 27% of the Swedish architectural profession live in houses built before 1930, even though these houses account for only 14% of the total housing stock (Jensfeldt, 2015). The majority (52%) within the architectural profession in buildings built before 1950, houses that account for 30% of the total housing stock.

However, there is also a discourse within the profession where it is not allowed to use historical buildings as role models when designing new buildings (Sternudd, 2007). There is a view that architecture must reflect its own time and thus not get to be retrospective; a notion that is associated with a modernist approach. Violation of this prohibition is ridiculed by means of derogatory epithets, indicating that it is false or ridiculous.

In the study of Catharina Sternudd (2007), laymen and architects were asked to grade a classical building. Both groups liked the building, but when they were told that the building was constructed recently, the architects changed their opinions, while the laymen did not. This could be related to authenticity, where architects find that buildings with a classical idiom are not authentic if they are built in the modern age (Nasar, 1998).

According to Sternudd (2007), modern architect education is still very influenced by the ideas of early modernists which in turn affects students' ideas on what is considered good architecture and what is not. This is also supported by Dr. Nikos A. Salingaros (2017), who claims that architecture students learn how to appreciate an acquired taste, i.e. blanch facades and abstract forms.

When it comes to adaption, architects usually have conceptual or associative references, while laymen use visual references. This means that laymen might consider adaption to existing buildings being visual, i.e. style, shape, material, colours. While an architect might a new building as adapted to existing buildings even though it is visually significant different, but the choice of colour refers to the art of a famous painter who was born in the area, or the shape of the building are inspired by a ship as a way of referring to the city’s closeness to the sea.

Table 1: Preferences of architects and laymen (Sternudd, 2007)

Architects prefer	**Laymen prefer**
Large-scale buildings	Small-scale buildings
Uniformed	Diversified
Few details	Many details
Cold colours	Warm colours
Contemporary style	Historical style
Original	Conventional

Over time, these attributes, or antonyms, have been used in studies meant to identify people's general aesthetic preferences in the built environment. In 2017, Granström and Wahlström used these antonyms in a questionnaire that was directed towards the general public. The results of this questionnaire were later compared with the results of interviews with

professional architects. According to this study, laymen and architects generally had the same aesthetic preferences as both groups valued St Eriksområdet, a neighbourhood in Stockholm that was built in the 1990's but inspired by the local classical architecture of the 1920's, the highest among five different neighbourhoods in Stockholm, all built in modern time. However, even though the architects could not identify any obstacles for building similar new neighbourhoods today, no similar project of that size has been built since then. It should also be said that the neighbourhood, when built, was highly criticized by the architectural profession who considered it a "pastiche".

Assumption 1: General differences exists between architects and laymen´s taste preferences.

2.5. Attributes

Based on the results of Granström & Wahlström, the antonyms were partly changed or refined and used in a similar questionnaire by Möller and Olsson (2018), as a way of identifying people's general preferences in the built environment and how perceived beauty affect the willingness to visit a place or a city. Here, no distinction was made between architects and laymen. The antonyms that will lay the basis for this study, are mainly based on these previous studies.

Assumption 2: Areas containing the identified attributes are generally perceived as more appealing than areas that does not contain the identified attributes.

2.5.1. Consistency and complexity

Consistency refers to the ability of different components to form a uniform and functional entity, while complexity can be described as intensity, contrast and lavishness (Granström & Wahlström, 2017). In order for an area to be perceived as attractive, the overall impression should be consistent and form a uniform and functional identity. However, there should also be some complexity and contrast since an environment that is to consistent will be experienced as boring. Too much complexity could lead to a chaotic impression. The latter could be seen in the article of Möller and Olsson (2018), where an old street with many later additions in different architectural styles suffered from a disenchanting effect.

Assumption 2a: An area that is not too consistent or too complex is preferred.

2.5.2. Level of details

People generally prefer a high level of details but details that are too protruding are perceived as ugly (Sternudd, 2007). A building should appear as if they are built with care, rather than manufactured in an industry but for details to be perceived as beautiful, it is not necessary that are expensive or handmade, as long as they appear to be (Granström & Wahlström, 2017).

Modernistic architecture is characterized by a scaled-down and geometrically simply architecture that is free from ornaments, as it is the very forms and construction of the building that stand for the architectural and artistic value. According to Sternudd (2007), these ideas is something that still affect the architect profession, where a simplistic idiom with few (if any) details are preferred.

Assumption 2b: The number of details affects how attractive an area is perceived, where a lot of details is preferred over few details.

2.5.3. Colours

Colourless facades, i.e. scales in white, black and grey, are rarely highly valued by laymen general (Sternudd, 2007). This, in contrast to colour richness which is generally appreciated, where light and warm colours are preferred. It is also important that the colours are harmonious and not too intense or garish, as it is often perceived as ugly or intrusive (Granström & Wahlström, 2017). However, architects generally prefer scales in white, black and grey (Sternudd, 2007). Some buildings in new areas also contain details with strong colours, i.e. balcony rails in green or orange glass (Granström & Wahlström, 2017).

Assumption 2c: Colouring affect how an area is perceived, where colourfulness is preferred over colourless.

2.5.4. Traditional or modernistic

Over time, people have developed an ability to recognize and understand different objects and environments from their exterior architecture (Sternudd, 2007) (Granström & Wahlström, 2017). Recognizable forms are believed to be preferred as they create a sense of security and readability of the environment. Traditional materials such as stone, wood and bricks are usually appreciated as they are perceived as warm, attractive and vibrant materials. This unlike material such as concrete, steel and glass that are often seen as cold, sterile, repulsive and dead (Sternudd, 2007). People in general prefer a traditionally built environment, whether it is historical or modern (old or new), is not important (Granström & Wahlström, 2017).

However, the architect profession is characterized by a modernist discourse, where traditional architecture is considered irrelevant or outdated (Sternudd, 2007). Thus, these works are – regardless of architectural quality – not elevated to role models, leading to traditional architecture becoming unavailable as a role model for modern construction. Therefore, architecture that has a more direct appeal to the public is not part of the repertoire that architects choose from, and architects who want to work within the traditional paradigm have few opportunities to develop a skill in the field.

As some of the respondents might not be familiar to the concept of modernistic architecture, the word contemporary is used in the survey, as contemporary or modern architecture is generally associated with modernistic architecture.

Assumption 2d: Traditional styles are preferred over modernistic styles.

2.5.6. Original as in unique

According to Catharina Sternudd (2007), something that is unique or original is new, or innovative while something that is conventional is commonplace, or ordinary. She also claims that in general, the public does not value originality very high. If they find a building ugly, they may want it demolished even it is the last of its kind. However, the two following studies suggest that even tough originality alone is not considered important, the term seems to be considered as something positive even among laymen (Granström & Wahlström, 2017) (Möller & Olsson, 2018).

The words original and conventional can also be related to the building's authenticity, where Sternudd described an authentic building is an original and conventional building as a pastiche, a copy. According to the study of Sternudd, most architects despise pastiches while laymen generally do not seem to put much weight in the importance of a building's authenticity. However, Möller and Olsson (2018) suggest that laymen do value perceived

authenticity but that architects' perception of what is authentic differs from what is found in previous marketing theory. Möller and Olsson also finds a distinction between originality and authenticity, where environments are apparently mass-produced could be perceived as authentic without being perceived as unique.

Assumption 2e: The originality of an area affects how beautiful the area is perceived, where a more common or anonymous expression is seen as negative.

2.5.7. Scale

According to Sternudd (2007), architects generally prefer large-scale buildings over small-scale buildings while laymen generally prefer the opposite. However, perceived scale is not always the same as actual scale. In the article of Granström and Wahlström (2017), the area with the highest buildings was perceived as the smallest. This because the aesthetics of the façades can affect the perceived scale. As an example. The perceived scale could be reduced through facades that are visually divided horizontally and/or vertically or higher and narrower windows. This could also be related to the research of Ellard (2015), showing that overly large and repetitive facades elicit negative emotions.

Assumption 2f: Areas that are perceived as small-scale is preferred over areas that is perceived as large-scale.

2.5.8. A sense of place

Architecture that contributes to a strong sense of place has been proven extremely important. This could be done through the use or material and shapes that refer to the place's unique history. According to a British report, the desire to respect historical form, style and material had 84% among the respondents of an interview, and 85% support in a discussion about what is most important when it comes to new constructions (Boys Smith, 2016). The study of Möller and Olsson (2018) supports this theory, as the result showed that laymen generally prefer a local expression is generally valued higher than a global expression.

None of these studies has examined architects general view on these antonyms. However, if Sternudds (2007) theory about architects being influenced by modernistic views is correct, it could be argued that a global expression will be preferred. This since early modernists, who claimed that modernism was *the* only architecture, had a goal of an international standardized architecture that did not adapt to climate or other local conditions (Asplund, 1980). A famous example of this idea is the flat roof, which Le Corbusier got from his inspirational trips to areas around the middle sea, where flat roofs are common as a result of a warm and dry climate, and a lack of space which made them fitting open air areas. Even though flat roofs are not fitting for Scandinavian climate, they are still common when it comes to newly designed buildings, as a result of the modernistic aesthetics ideal.

Assumption 2g: A local expression is preferred over a global expression.

2.6. Marketing theory

2.6.1. Storytelling

The human brain runs a narrative (Sussman & Hollander, 2014). How we see our world and ourselves ultimately involves a story. Storytelling can be said "telling a story", but not only in verbal form (Lee & Shin, 2015). Storytelling refers to communication means that take various forms depending on the medium. Narrative is the ability of the mind to create stories and, in

the process, find multiple ways of linking to the environment and securing a place in it. According to Sussman and Hollander (2014) people consistently look for orientation and connections to their environment. We look for ways to make attachments and derive meaning from our physical surroundings. In other words, every plan and urban design has the potential to acknowledge and respond to this trait in some way or another.

This could also be connected to the importance of architecture that contributes to a strong sense of place. People have always told each other stories about the places they are from, the places they live in, and the places they have visited (Bassano et al., 2019).

2.6.2. Authenticity and enchantment

A distinct feature of the modern consumer society is the increased rationalization of production, and the construction industry is no exception. When brands perform these rationalization processes, they often lose its so-called enchantment, which ultimately leads to a loss of authenticity (Hartmann & Ostberg, 2013). Authenticity and Enchantment is often seen as synonyms but there are important differences. An authentic product or experience could be disenchanting. As an example, fermented herring is traditionally eaten in Sweden from the fermented herring premier at the third of august each year. This might be an authentic feature, but the distinctive taste and smell could have a negative and disenchanting effect, even though the authenticity remains. Hartmann and Ostberg, also saw that authenticity is constantly exposed to various enchantment discourses as the market interprets the brand. With rationalization, brands often lose their cultural, mythological and romantic parameters that existed in an earlier era. However, with the example of the re-launched guitar brand Hagstrom, the authors describe how lost enchantment could be recovered by alluding and repeating the craft discourses that the brand previously relied on. By alluding on the brands Swedish crafts heritage through various enchanting discourses, the company succeeded in reversing public opinion in the market on regain its authenticity despite outsourcing production to China. This shows that the products do not have to be crafted at home, but that the authenticity itself is culturally implicit perceptions. Hartmann and Osteberg also identifies five craft discourses that are used by brands as a way of strengthening and protecting their authenticity through enchantment. These are:

Möller and Olsson (2018) found that an older area with extensions in many different styles from different epochs had lost its enchantment. This could be related to the concept of Antinomy which considers how a balance between new and old, tradition and development can create a sense of authenticity without sacrificing modern requirements for standard and comfort. Antinomy is linked to the model “the 4As of retro branding” (Brown et al., 2003).

In this model, the Antinomy is the paradoxes created in brands over time. It deals with the brand´s soul, how it manages to balance different contradictory elements.

The other three A’s in the model are Allegory, Arcadia and Aura. Allegories are essentially the brand´s symbolic stories, narratives, or extended metaphors. The expressions that offer answers to customer´s moral conflicts. Arcadia stands for the ideal image that the brand is trying to achieve, where an almost Utopian sense of past worlds and communities is evoked. This means that Arcadia is strongly linked to ideal conditions. For brands with a rich heritage, romanticized allegories of ancient times are often used to produce positive associations with the brand. Aura is in the model seen as a synonym to authenticity, which is described as a representation of something that is unique.

2.6.3. Positioning & perceived value

In order to be competitive brands, besides having an attractive offer, need to have distinct and difficult-to-imitate position in the consumer´s mind (Dall'Olmo Riley et al., 2016). Positioning, one of the most important concepts within marketing, means creating associations and mental images within the customer´s mind that distinguishes a brand from other within the same industry. Brands already have, consciously or unconsciously, a position in the minds of those who are familiar with the brand. Positioning is a conscious strategy to strengthen or change that position. The brand itself can be defined as a product that adds other dimensions that makes it different ("differentiate") it from other products and services designed to meet the same needs. The result of a successful positioning is a distinct brand or a distinct mental image in the mind of the customer. According to Trout and Rivkin (1998), differentiation, or distinguishing a brand from the competitors, is a necessity. As an example, positioning and differentiation play a role whether customers or consumers choose Coca Cola or Pepsi or when they choose where they spend their vacation. There are also aspects that make certain brands sell similar products than their competitors fixed at a higher price. As an example, Starbucks are able to sell their coffee to a higher price than many other cafes.

This could be related to perceived value, which is the customer´s evaluation of the merits of a product or service and its ability to meet their needs and provide satisfaction, especially in comparison with other products or brands (Wu et al., 2014). In some cases, the price of a product or service may have more to do with its emotional appeal than with the actual cost of production.

2.7. Design principles and definitions

Global and local

In this article, a local expression means that the building though its architectural design connects to its geographical context. This can be done by linking to the history of the site through materials or style. The place could be a street, a neighbourhood, a city, a country or even a continent. The more specific place the architecture connects to, the more local it could be considered. At the other end, we have a global expression, where the buildings do not link to any special place through their aesthetics.

Traditional and contemporary

A traditional building could mean a building that is constructed in accordance with an acknowledged way of building similar houses (Sternudd, 2007). In everyday speech, the word traditional could also be used as a description of new architecture that does not aim to resemble buildings of the modernistic era nor find a whole new design language. Often the word modern or contemporary refers to modernist architecture, while traditional may include all other known design languages.

Scale

Scale is defined as the size of an object, compared to either a reference measurement or the size of another object (Ching, 2007). Proportion on the other hand, refers to a relationship between different objects or between parts of the same object. The relationship can have several different units, for example magnitude, quantity and degree. The perceived scale and proportion might not be consistent with their true physical dimensions. The perceived scale and proportions are influenced, among other things, by the perspective from which an object is observed, the distance to the object and cultural preferences (Granström & Wahlström, 2017).

A visual quality is mainly a result of how the object´s proportions and scales are perceived by the observers. Consequently, not all observers have the same views on the visual qualities of the objects. When it comes to the perceived scale, the decision factor lies in how an object is perceived in relation to its "standard size" or to other objects in the environment. The perceived scale of a building is affected by all different parts of the building, such as windows, colours, texture, doors and dimensions of the building. As an example, large windows could change the estimated scale of an entire façade. Narrow, tall windows and different layers and details in the façade should break down the scale and make it more humane (Granström & Wahlström, 2017). Other parts present in the landscape, i.e. surrounding buildings, also affect the building's perceived scale. Often when it comes to different elements in the built environment, it is common to have a predefined idea of what size these elements should have, these predetermined views are often based on tradition. When a building is perceived to be larger than its actual size, it is said to be large-scale, while a building that is perceived as smaller than its actual size can be said to be small-scale.

Scale, large-scale or small-scale, could also be associated to the perceived production method, where large-scale relates to industrialization and mass production while small-scale relates to manual labour and craft.

Architects

In this article, the term architects are sometimes used as a further meaning beyond what the professional title indicates. This since earlier studies indicate that one group has distinctly different aesthetical values than laymen in general. This group consists of architects but also city planners, architectural critics, designers, architectural theorists and other professional groups within design and artistic activities or with theoretical focus on the field of architecture. This professionally diverse group seems to a large extent have a common aesthetic valuation pattern. Even tough more professional categories than architects are included, the difference between architects and laymen is the one who is interesting in my reasoning and the reason why architects are used as a generalizing concept.

3. Methodology/Delimitations/Disposition

This chapter will describe the research methodology, which is the specific procedures or techniques to identify, select, process and analyse information about the chosen topic.

3.1. Research approach

The purpose of this study was to create an increased understanding for how cities can use architecture aesthetics as a way of increasing their social, economic and environmental sustainability, and thereby their attractiveness in a global market. The theoretical framework that was presented in the previous chapters forms the basis of the study, and through previous research a number of attributes that seem vital when it comes to creating an area that is perceived as aesthetically appealing. To answer the research questions, information from the general public and professional architects regarding their aesthetical preferences and attitudes related to these issues is needed. As the goal is to examine attitudes among the general public, a quantitative study is fitting, as it enables cost-effective large-scale data collection. A survey was conducted in which the respondents were allowed to value different urban environments based on the previous identified attributes.

When conducting research, you can apply either a deductive or inductive approach (Saunders et al., 2009). With a deductive approach the goal is to test theory, something that is done through establishing a framework and then use data to confirm or reject the theory. With an inductive approach on the other hand, you start with collecting data, with the aim to build a theory from the collected data. This study is based on theoretical framework where assumptions are created and then tested through the carried-out it should primarily be regarded as deductive. An advantage with having a deductive approach is that the objectivity of the study is assumed to be strengthened, as it proceeds from previous research. However, the results of the study, our empirical data, has generated new theory through the analysis and should therefore also be regarded as inductive research.

The empirics that were collected mainly constituted of quantitative data, but also of some qualitative data. The quantitative data is presented using charts, diagrams and average scores. The open question in the questionnaire were partly considered as qualitative data, but some quantitative data could also be retrieved from the questionnaire´s open question, as it was displayed how many times a specific word occurred. Some of the words from the open questions are quoted while other answers that were repeated frequently by several of the respondents are summarized. Even though the analysis of the questionnaire was mainly based on quantitative data, it was some extent also based on qualitative data.

3.2. Selection and implementation (Sampling)

When the opinion of the “general public” is desired, it is rarely possible to acquire this information from every individual within this population when considering time frame or budget constraints (Saunders et al., 2009). When having a big population, one must instead create a sample. The goal was to get a sample where both laymen and people within the profession was represented and that was diverse when it comes to age, gender and level of education. Therefore, questions considering these topics were included in the questionnaire. Further, it was of great importance to the study that it would include individuals with some form of relation to the different areas, as cultural factors, i.e. recognition of the selected

environments and any nostalgic feelings associated with certain architecture. These uncertainties are assured through questions where respondents must answer questions about their knowledge about where the facades on the pictures are located.

The age and gender distribution among the questionnaire respondents are shown in *Figure 1*. The gender distribution was relatively even between men and women, even though more women answered the questionnaire than men. About 6 out of 10 respondents were women. The questionnaire was spread in a social media channel directed at adults and only adults was contacted through e-mail, resulting in no respondents in the age of 0-15. All other age groups are represented.

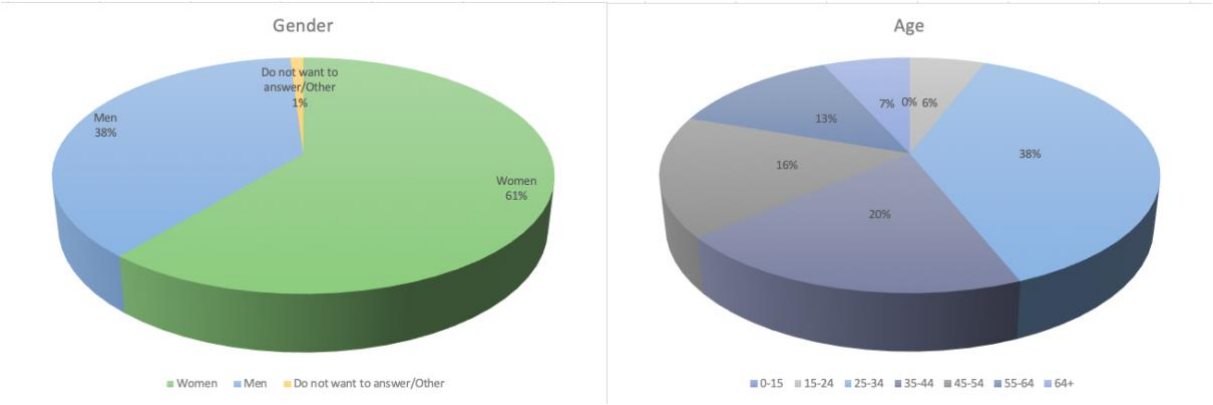

Figure 1 – Gender and age distribution among questionnaire respondents

The respondents were also asked about their level of education and current housing situation, and the results are shown in *Figure 2*. The respondents were in more well-educated than the Swedish population in general. The share of respondents with more than three years at university studies was 54%, compared to the Swedish population in general, where the number is 28% (SCB, 2020). People with a low level of education (No more than elementary school) were only 1%, while it is 11% of the Swedish population in general. 59% of the respondents lived in a multi-family residential apartment and 39 percent lived in a villa, townhouse or similar. This is rather close to the Swedish distribution in general, where 48% live in multi-family residential apartment and 51% live in a villa for one or two families.

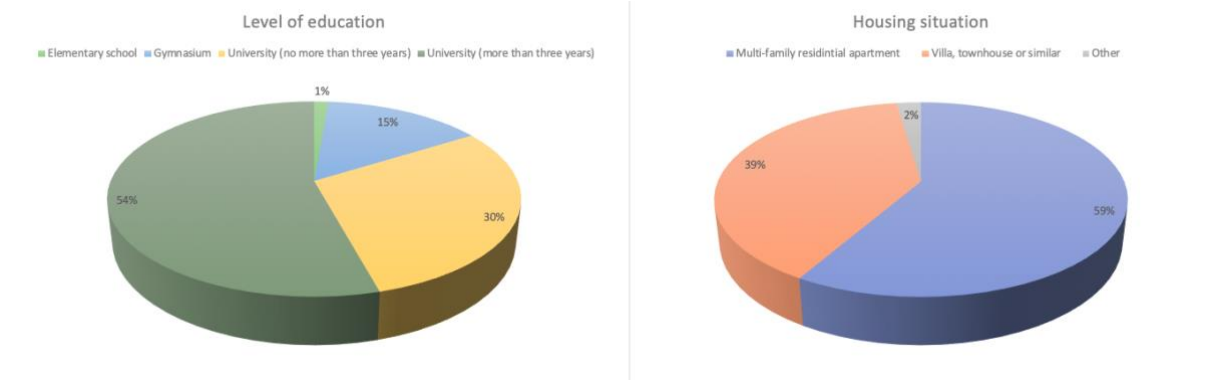

Figure 2 - Level of education and housing situation among questionnaire respondents

As a minimum target for the survey, two hundred respondents were set. The procedure for spreading the survey was mainly through social media and mailings to Swedish architectural firms. In order to reach a wider selection, the questionnaire was also distributed to other

people in the vicinity of the writer, as they could reach an older target group with other social and economic conditions. In order to avoid an angled result, the opportunity to share the survey in different groups with an angled agenda was excluded.

The survey was created through the computer program Webropol and kept open for one week. It was spread through social media and e-mail.

To answer the research questions and its assumptions a descriptive analysis was used. Average values and response rates for all attributes for each area was generated. With the help of these numbers, an analysable representation of the outcome was created. This since, as an example, measuring the correlation of the assumptions would have produced an incorrect result, as the attributes does not follow how the facades are perceived at an individual level. A respondent who thinks the façade is ugly should perceive the attributes equally to a respondent who thinks the façade is beautiful, but the overall outcome should point out that an attribute is dominant when a façade is experienced in a certain way.

4.2. Response rate and dropout

The questionnaire was answered by 223 individuals. The total number of people who might have been reached on social media is about 1500 individuals, which is based on the number of Facebook friends of those who shared the link to the questionnaire. The number of individuals contacted through mail was 150. Of these, 5 people were unreachable because of an incomplete e-mail address. The active response rate, i.e. the total number of responses divided of persons in the sample that received the questionnaire is calculated below.

$$\text{Active response rate} = \frac{223}{1500+150-5} = 0{,}136$$

The likely response rate for internet mediated questionnaires is 11 percent or lower (Saunders, et al. 2009). A response rate of 13,6 percent is therefore acceptable.

The rather low active response rate for internet mediated questionnaires could be partly be explained to the fact that people have no real incentive to do the survey, other than being friendly. There is also a chance that the potential respondents did not use social media or checked their e-mail during the period that the questionnaire was open. The algorithms om social media will also prioritise posts that is believed to be relevant for each user, while e-mail services might sort some mailings as spam, further reducing the number of people who are actually reached. Since it is not possible to know how many have seen the post or the mailings, a completely accurate picture of the size of the selection can´t be reached.

3.3. The Survey

The focus of the survey was to investigate how different areas are perceived depending on their exterior aesthetics. The term architecture clearly encompasses other aspects than solely aesthetics, i.e. acoustics, odour and temperature. Characteristics that are not visibly observable but still important for a building´s functionality (Sternudd, 2007). However, aesthetics affects all users of the exterior environment, not just those who live or work in the buildings. Architecture as a term will not be used in the survey, as there are several aspects of architecture that are not discussed in this study. The purpose of the study is not to define good or bad architecture. The study examines what users of the built environment find aesthetically pleasing, and how this could be related to issues on sustainability.

How different architecture are perceived, what is found aesthetically pleasing and what is repulsive varies between individuals. In the questionnaire, the respondents were asked about their personal aesthetics preferences. The answers will say nothing about the beauty of a specific building. The only conclusions that can be drawn is that respondents preferred certain areas over other in the study.

3.4. Question Design

The survey examines how respondents perceive the built environment of five different areas in Swedish cities. Since this is a quantitative study in the form of a questionnaire where the attitudes of the respondents being measured, a semantic differential scale is used. Semantic differential is a type of rating scale designed to measure the connotative meaning of objects and is common in studies related to consumer behaviour (Möller & Olsson, 2018). The respondents value each area using sematic differential scales that are based on the aesthetics attributes presented in the theory, before answering questions regarding the perceived attraction (added value) of the areas.

To be able to answer questions regarding whether the potential added value could contribute to an environmentally, socially and economically sustainable society, three questions related to these issues was created. These are willingness to take a walk in the areas, the willingness to preserve these buildings and whether it is perceived as an attractive living environment.

In the survey, the scales are presented in a range from 3 to 0 and then up to 3 again for the opposite option. This is done so that the respondent will instinctively understand that 0 is the neutral option. However, in the subsequent analysis, the statistics will be presented on a scale 1-7 where 1 is the extreme in one direction, 7 in the other the neutral option being 4.

There was also an open question where respondents were asked to describe the different areas with between 3 or 5 of their own words, as a way of complementing the closed questions. To examine whether the five environments were recognized by the respondents, every environment had an open question regarding whether the respondent could name the area or not.

3.5. The 5 different environments

Five different areas or neighbourhoods, which all represent different types of aesthetics, was included in the survey. The peculiarities of the streets have served as a basis for measuring the popularity of the attributes that has been identified through previous studies. The goal has been to, as far as possible, exclude other factors that might influence the result. Therefore, factors such as vegetation, operations in the bottom floor (i.e. stores), people and cars were consciously avoided. However, this has not been entirely possible to avoid, and some vegetation could be spotted in the areas Jakriborg, Masthugghet, Majorna and Stigberget. This area could potentially gain a small advantage compared to Lindholmen, where no vegetation is visible. Further, some cars are visible in the pictures of Majorna and Jakriborg while a few people could be spotted in the latter area, which might also have a slight impact on the result. The weather conditions were held as equal as possible, with blue skies and sunny weather. However, two pictures of Jakriborg was taken closer to dawn and the street lights were on, something that might have had a slight impact on the result. All pictures were taken with a camera of the same kind and were all between 700-800 kilobytes. All areas represented are in Gothenburg, Sweden, except Jakriborg which is placed close to Lund and Malmö in Sweden. This since there are no areas in Gothenburg that are built on the principles of traditional architecture within modern time.

1. Jakriborg

2. Masthugget

3. Majorna

4. Lindholmen

5. Stigberget

Area 1: Jakriborg
Jakriborg is a housing estate close to Lund and Malmö in Scania, southern Sweden. The area was built from 1999 and has been growing ever since. The streets of Jakriborg are reminiscent of the medieval street grid that remains in the city centres of Scania, while the architecture is traditional containing Dutch and German influences. A majority of the apartments are rentals and compared to similar projects from this era, the rents were relatively low. Even though Jakriborg has long residential ques and has been given attention in international media, it remains controversial within the architectural profession where it is seen as a "pastiche", i.e. not authentic (Loxdal, 2016). Previous studies strengthen the perception that the architecture of Jakriborg is generally well liked by laymen, is provoke parts of the architect profession (Sternudd, 2007) (Kolakowski, 2017). This area will represent traditional architecture that has been built in modern times.

Area 2: Masthugget
Masthugghet is one of the oldest city districts in Gothenburg, Sweden. In 1963, the Swedish newspaper Expressen wrote that Europe´s largest "sanitation" project would take place in Gothenburg, with 15 000 apartments being demolished and 50 000 residents being relocated. The first area to be affected was Masthugget and only a year later, in 1964, the demolitions started. The demolished buildings were generally built between 1880-1915 and had no cultural-historical value according to authorities concerned. The idea was to create a "contemporary housing area with a calm, unified character" (Simonsson, n.a.). However, most of the residents was moved to newly developed suburbs. According to a sociological examination that was made prior to the "sanitation" project, the residents enjoyed living in the area despite a low material standard and was moved against their will. The area will represent the architecture of the Million Homes Programme.

Area 3: Majorna
Majorna is a previous working-class neighbourhood in Gothenburg. Majorna derives much of its character from the typical Gothenburg houses, called "landshövdingehus". This is also a house type that dominated Masthugghet previous to the demolition wave. Majorna will represent traditional architecture built before the impact of modernism. However, it should be added that the facades have been slightly altered within the last decades, where details and colours somewhat differ from the original aesthetics.

Area 4: Lindholmen
Lindholmen is one of the fastest-growing city districts in Gothenburg, where 28% of the housing is built after 2011 (Göteborgs stad, 2019). The idea is that Lindholmen will be a representative of typical contemporary architecture.

Area 5: Stigberget

Stigberget is a part of Majorna that is lays close to Masthugget. Soon after the demolitions of Masthugghet, the excavator reached Stigberget. Today, the area contains a mix of old buildings, buildings built at the time of the Million Homes Programme and contemporary buildings. The idea is to involve an area involving great variations with architecture from different eras and in different styles.

3.6. Terminology

All respondents cannot be expected to have any special knowledge within the research area. Therefore, it was very important to use a terminology that was easily understood by everybody. Words that are common in the everyday language, as well as words that are as neutral as possible, were strived for when designing the questions. Using words that have a negative or positive tone might bias the result by making the respondents choose what they think is the "best" answer.

The terminology that was used in the questionnaire deliberately avoided the term architecture, instead the respondents were asked questions about the built environment. The term aesthetical was also avoided in the questionnaire since the word can have different meaning to different people and a language that could be easily understood by everybody was desired. Instead of *modernistic*, the word *contemporary* was used in the questionnaire. This word is easily understood by everybody and can be assumed to have the same meaning to most people. The word contemporary is easily understood by everybody and can be assumed to have the same meaning to most people.

Since the questionnaire was distributed in Sweden, the language in the questionnaire was Swedish. Swedish was chosen in order to reduce the risk of having misunderstandings or misinterpretations caused by the language.

3.7. Method of analysis

Two assumptions and three hypotheses were created to be able to answer the research questions. A hypothesis is a linguistic sentence where different concepts are put in relation to each other (Patel & Davidson, 2011). The basic idea is that he hypothesis is linked to an empirical investigation and that it can either be confirmed or disconfirmed. Something that could be applied to the method of analysis that was chosen to answer *hypothesis 1*, *hypothesis 2* and *hypothesis 3*. A Spearman's rank correlation coefficient was used to examine whether the antonyms repulling–appealing, unpleasant-pleasant correlates with the antonyms ugly – beautiful. A Spearman's rank correlation coefficient test was also used to examine the correlation of the level of perceived beauty with the willingness to take a walk in the different areas, the willingness to preserve the buildings of the different areas and the perceived attractivity of the environments as living environments.

While a hypothesis does not become a theory until it is proven and tested, an assumption is a statement that is believed to be true. Within qualitative research, that is of a more interoperate nature, hypothesis is rare (Patel & Davidson, 2011). To answer the remaining research questions a more qualitative approach was used, where the answer could be more complex than a simple confirmation or disconfirmation Therefore, the concept of assumptions was used to answer the remaining questions.

To be able to answer *assumption 1* descriptive analysis were used, where the average scores of the different areas was compared between the groups. Further, a qualitative analysis of the

open questions was used. This since the selection of architects (27 individuals) is too small to draw statistically signicantly conclusions.

The sematic differential scales that are based on the aesthetics attributes presented in the theory, could be interoperated as interval scales, as the type allows for the degree of difference between items, but not the ratio between them. Based on these scales, a descriptive analysis is made in order to answer *assumption 2*.

3.8. Reliability and validity

The level of reliability is determined by how the measurements are performed and how accurate you are when processing information. High reliability is reached if different and independent measurements of one and the same phenomenon yields the same of approximately the same result (Holme & Solvang, 1996).

However, having reliable information is not enough. If the information measures anything other than what you want to measure or believe that you are measuring, it could be very reliable, but still not be fit to test your question formulations (Holme & Solvang, 1996). A necessary prerequisite is to have valid information. This means that the operationalization of the theoretical variables must have been done in such a way that the theoretically defined variables and the operationalized variable coincides to the greatest possible extent.

To ensure that the validity of the survey is high, the content validity can be examined (Patel & Davidson, 2011). This is done through conducting a rational analysis of the contents of the instrument. The variables which are developed are all linked to previous research, since the approach of the study is primarily deductive. The attributes or antonyms which are developed are all linked to previous theory, since the work´s approach is primarily deductive. All of these attributes and their effect on perceived beauty have been used in previous research, but on other city environments (Möller & Olsson, 2018). However, further notions have been added in this survey. As previous research indicate that architects generally are not interested in valuing architecture through conceptions of beauty or ugliness (Sternudd, 2007), the notions of repellent or pleasant are added. Further, the antonyms unfriendly or friendly are added as previous research suggest that these are notions that laymen often use to describe their perception of an environment (Sternudd, 2007). As an important part of this article is to examine the relation between perceived beauty and sustainability three further questions were added. As the architecture of the Million Homes Programme was criticised for being a monotonous and unattractive environment, that does not encourage physical movement or spontaneous walks (Alfvén, 2016), a question regarding the willingness to take a walk in each area was added. According to Kellert (2012), it is important to create emotional attachment to a place, motivating people to care for their constructions and retain them over the long term. Therefore, a question regarding whether people perceive the buildings as important to preserve is added. Previous studies also indicate that people are willing to pay more for buildings that are in non-modernistic styles (Buitelaar & Shilder, 2017) (Hellekant, 2019), whereas a question whether the different places was perceived as attractive living environments or not was added. As there is an emphasis on marketing theory and the cultural aspects that effect individuals' perceptions of an environment, an open question was included, where the respondents were asked to describe each environment with between three to five words.

Discussing reliability, it is important that the questionnaire is clearly formulated and that the respondents perceive the questions as they are intended. The risk of the questions being

misunderstood has been minimized through testing the survey on 7 people of the intended audience, before spreading it to a wider audience.

4. Empirical findings

The empirical findings, or result, from the questionnaire will be presented in this chapter. The data from the survey is based on 223 questionnaire responses. First, the result in general will be discussed. Then more specific data will be presented, area by area. The result is to some extent summarized in the analysis as well, but in a shorter version.

4.1. Architects and laymen

The selection of architects included 27 individuals and therefore too small to draw statistically signicantly conclusions, but differences have been ascertained through qualitative analysis. When it comes to the identified attributes, all respondents have been treated as one group, as the attributes are reasonably objective in their nature, and no considerable differences have been found in the valuation pattern of the attributes. However, some differences have been found in how architects and laymen value the different environments.

4.2. Perceived beauty

A crucial variable in the questionnaire was the percieved beauty or ugliness of an area. This was measured on a semanthic scale, where 7 was the maximal point for percieved beauty, while 1 was the minimum point, meaning that the area was percieved as ugly. The most beautiful area according to laymen was Jakriborg with 6.4 points. Majorna came second, with 5.9 points. Masthugget was percieved as the most ugly area, with 1.6 points, coming close to 1 which was the minimum point. The rather newly developed area Lindholmen got 3.5 points indicating that it was percieved as more ugly than beautiful. The mixed area, Stigberget, got 4.5 points.

The architects in general had a similar evaluation pattern. Even tough Jakriborg was lower ranked by the architects it was percieved as one of the most beautiful areas together with Majorna, as both areas got 5.8 points. Even tough Masthugget was more appriciated among architects in general, it was still percieved as the most ugly area, with 2.6 points. Lindholmen, the rather newly developed area, got 3.5 points while Stigberget got 4.9 points.

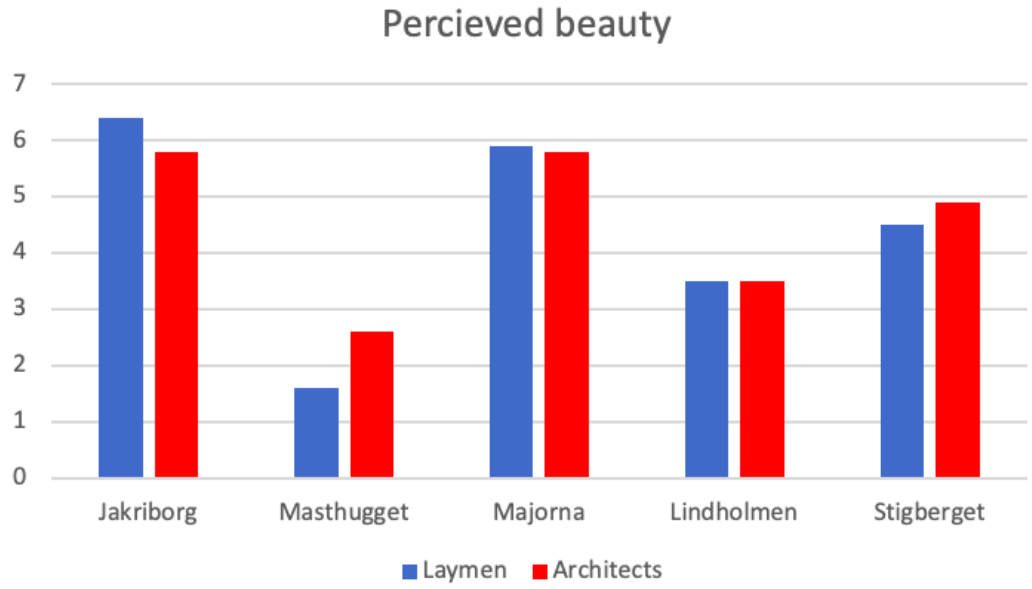

Figure 3

However, architects that were able to identify Jakriborg, i.e. most likely to recognize as being built in the modern age, trough the open question valued that area lower than other groups. with 4.8 points, i.e. being percieved as the third most beautiful area. A similar pattern was not found among the laymen that were able to identify Jakriborg.

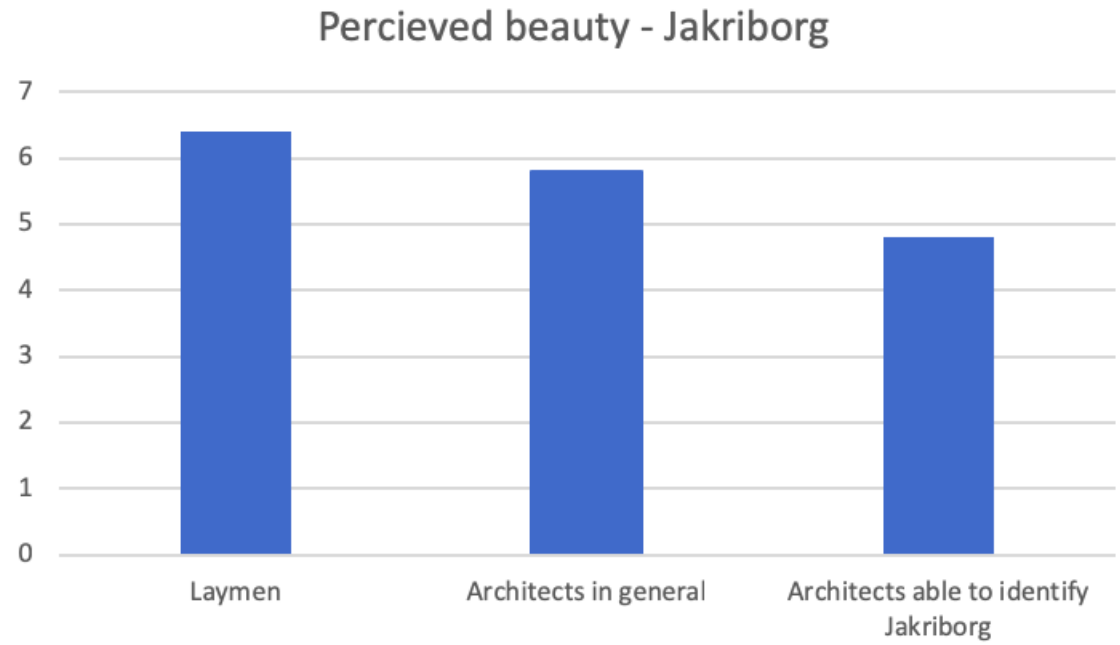

Figure 4

4.3. Standard deviations

As a way of controlling the variation within the two groups, the standard deviations on all questions was calculated and then analysed. As there were no significant differences between the groups when it came to the identified attributes, the standard deviation of the two groups will be presented as one. The numbers regarding the different attributes stayed around 0.7-0.9 indicating a relatively low variation. However, there were a few exceptions. The answers related to the attribute of scale had a slightly larger variation for three of the tested areas (1.0, 1.1 and 1.1), indicating a relatively high variation. For two of the tested areas, the answers related to the attribute of place (global and local) had a slightly larger variation (1.0 and 1.1) than in general while the concept of variation (uniform and diverse) got standard deviations of 1.0 at one occasion. An occasionally higher spread (>1) could be excepted, as the there are no definitive, objective answers but scales characterized by people´s subjective perceptions. Some attributes or concept might be more subjective to their nature, but there might also be difficulties when it comes to understanding some of the concepts. The attribute of scale, which had a relatively high variation for three of the tested areas, is a concept that respondents in previous studies (Granström & Wahlström, 2017) (Möller & Olsson, 2018) have had some difficulties with, as some find it hard to interpenetrate or define.

Further, even though the standard deviations within the groups in general were relatively low (<1) some differences were identified when it comes to how attractive the different areas were perceived. The group of architects were more divided than the laymen when it comes to how pleasant, friendly and beautiful they experienced Jakriborg. The standard deviations of the group of architects was found 0.2 higher (0.8, 0.8 and 0.9) than laymen (0.6, 0.6 and 0.7). A similar pattern was found when it comes to the willingness to take a stroll in the area and the willingness to preserve the buildings where the group of architects had a standard deviation of

0.8 and 0.9, while laymen had 0,7 and 0.8. Further, the group of architects had a standard deviation of 0.9 regarding the perception of the area as an attractive living environment, while the group of laymen had a standard deviation of 0.8.

For the rest, the only numbers that stood out when comparing the variation within the groups was the standard deviation connected to how beautiful the area of Masthugghet was perceived. Here, the group of architects had a standard deviation of 1.2, while laymen had a standard deviation of 0.9. A standard deviation of 1.2 is relatively large, indicating that while laymen overall agreed about the level of ugliness or beauty of Masthugghet, the group of architects had different views to a larger extent. Regarding the remaining questions, the differences between the groups were relatively low (<1) and small (0.1 points difference or less) and is therefore not further reported or discussed in this article.

4.4. Jakriborg

Picture 1 - Jakriborg

The first area to be presented in the questionnaire was Jakriborg. As mentioned, a semanthic scale was used, where 7 was the maximal point, 1 was the minimum point, and 4 was a neutral value. The willingness to take a walk in Jakriborg had an average of 6.5 points, the willingness to preserve the buildings had 6.4 points and the perception of the area as an attractive living environment resulted in 6.3 points. Further statistics are presented in the tables below.

Table 1

	Average	Standard deviation
Colourless - Colourful	5.7	0.8
Few details - Many details	5.8	0.8
Uniform - Diverse	4.7	0.9
Contemporary - Traditional	5.9	0.9
Global - Local	5.2	1.0
Conventional - Original	5.3	0.9
Large-scale - Small-scale	5.3	1.0

Table 2

	Correlations				
		(Reppellent/Pleasant)	(Unfriendly/Friendly)	(Ugly/Beautiful)	
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.794**	.771**	
	Sig. (2-tailed)	.	.000	.000	
	N	222	222	222	
How do you experience these facades? (Unfriendly/Friendly)	Correlation Coefficent	.794**	1.000	.715**	
	Sig. (2-tailed)	0.000	.	.000	
	N	222	222	222	
How do you experience these facades? (Ugly/Beautiful)	Correlation Coefficent	.771*	0.715**	1.000	
	Sig. (2-tailed)	.000	.000	.	
	N	222	222	222	
**. Correlation is significant at the 0.01 level (2-tailed)					

Table 3

	Correlations				
		(Ugly/Beautiful)	Stroll	Preserve	Live
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.647**	.598**	.571**
	Sig. (2-tailed)	.	.000	.000	.000
	N	223	222	221	222
Willigness to take a stroll in the area	Correlation Coefficent	.647**	1.000	.615**	.535**
	Sig. (2-tailed)	.000	.	.000	.000
	N	222	222	221	222
Willigness to preserve the buildings	Correlation Coefficent	.598**	0.615**	1.000	.628**
	Sig. (2-tailed)	.000	.000	.	.000
	N	221	221	221	221
Perception of the area as an attractive living envoirenment	Correlation Coefficent	.571**	.535**	.628**	1.000
	Sig. (2-tailed)	.000	.000	.000	.
	N	222	222	221	222
**. Correlation is significant at the 0.01 level (2-tailed)					

4.4.1. Open question

The most common words to describe Jakriborg was *beautiful* (61 times), *cosy* (35 times), *traditional* (24 times) and *unique* (19 times). These words were also common among the architects, even though associative conceptions were more frequent (i.e. *subsistence level, fruit and vegetables).* Even though some of the architects that that were able to identify the area used positive words to describe Jakriborg, a clear majority of the descriptions within this group was that it was not authentic, i.e. *pastiche*, *false*, *Disneyland*, *tragic*, *comical* and *kitsch.*

4.5. Masthugghet

Picture 2 - Masthugget

The second area to be presented in the questionnaire was Masthugghet. The willingness to take a walk in Masthugghet had an average of 1.9 points, the willingness to preserve the buildings had 2.2 points and the perception of the area as an attractive living environment resulted in 2.0 points. Further statistics are presented in the tables below.

Table 4

	Average	Standard deviation	
Colourless - Colourful	1.6	0.8	
Few details - Many details	1.9	0.9	
Uniform - Diverse	1.8	0.8	
Contemporary - Traditional	2.6	1.0	
Global - Local	2.7	1.1	
Conventional - Original	1.8	0.8	
Large-scale - Small-scale	1.9	1.1	

Table 5

	Correlations				
		(Reppellent/Pleasant)	(Unfriendly/F	(Ugly/Beautiful)	
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.805**	.712**	
	Sig. (2-tailed)	.	.000	.000	
	N	223	223	223	
How do you experience these facades? (Unfriendly/Friendly)	Correlation Coefficent	.805**	1.000	.792**	
	Sig. (2-tailed)	0.000	.	.000	
	N	223	223	223	
How do you experience these facades? (Ugly/Beautiful)	Correlation Coefficent	.712*	0.792**	1.000	
	Sig. (2-tailed)	.000	.000		
	N	223	223	223	
**. Correlation is significant at the 0.01 level (2-tailed)					

Table 6

	Correlations				
		(Ugly/Beautiful)	Stroll	Preserve	Live
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.605**	.564**	.564**
	Sig. (2-tailed)	.	.000	.000	.000
	N	223	222	222	222
Willigness to take a stroll in the area	Correlation Coefficent	.605**	1.000	.549**	.674**
	Sig. (2-tailed)	.000	.	.000	.000
	N	222	222	221	221
Willigness to preserve the buildings	Correlation Coefficent	.564**	0.549**	1.000	.481**
	Sig. (2-tailed)	.000	.000	.	.000
	N	222	221	222	222
Perception of the area as an attractive living envoirenment	Correlation Coefficent	.564**	.674**	.481**	1.000
	Sig. (2-tailed)	.000	.000	.000	.
	N	222	221	222	222
**. Correlation is significant at the 0.01 level (2-tailed)					

4.5.1. Open question

The respondents in general used words like *boring* (72 times), *ugly* (42 times), *grey* (27 times) and *cold* (24 times). These words were also common among the architects, even though associative conceptions were more frequent. Among the words that was by the architects was also *social experiment*, *the Valley of the Shadow of Death*, *snobby*, *good* and *flashy*.

4.6. Majorna

Picture 3 - Majorna

The third area to be presented in the questionnaire was Majorna. The willingness to take a walk in Majorna had an average of 5.8 points, the willingness to preserve the buildings had 6.0 points and the perception of the area as an attractive living environment resulted in 5.9 points. Further statistics are presented in the tables below.

Table 7

	Average	Standard deviation	
Colourless - Colourful	5.6	0.8	
Few details - Many details	5.2	0.8	
Uniform - Diverse	4.2	0.9	
Contemporary - Traditional	5.6	0.9	
Global - Local	5.7	0.9	
Conventional - Original	5.1	0.9	
Large-scale - Small-scale	5.0	1.0	

Table 8

Correlations					
		(Reppellent/Pleasant)	(Unfriendly/F	(Ugly/Beautiful)	
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.794**	.771**	
	Sig. (2-tailed)	.	.000	.000	
	N	222	222	222	
How do you experience these facades? (Unfriendly/Friendly)	Correlation Coefficent	.794**	1.000	.715**	
	Sig. (2-tailed)	0.000	.	.000	
	N	222	222	222	
How do you experience these facades? (Ugly/Beautiful)	Correlation Coefficent	.771**	.715**	1.000	
	Sig. (2-tailed)	.000	.000	.	
	N	222	222	222	
**. Correlation is significant at the 0.01 level (2-tailed)					

Table 9

Correlations					
		(Ugly/Beautiful)	Stroll	Preserve	Live
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.674**	.643**	.653**
	Sig. (2-tailed)	.	.000	.000	.000
	N	222	222	219	220
Willigness to take a stroll in the area	Correlation Coefficent	.674**	1.000	.650**	.717**
	Sig. (2-tailed)	.000	.	.000	.000
	N	222	222	219	220
Willigness to preserve the buildings	Correlation Coefficent	.643**	0.650**	1.000	.701**
	Sig. (2-tailed)	.000	.000	.	.000
	N	219	219	219	219
Perception of the area as an attractive living envoirenment	Correlation Coefficent	.653**	.717**	.701**	1.000
	Sig. (2-tailed)	.000	.000	.000	.
	N	220	220	219	220
**. Correlation is significant at the 0.01 level (2-tailed)					

5.6.1. Open question

The respondents in general used words like *nice* (26 times), *cosy* (26 times), *enjoyable* (25 times) and *beautiful* (19 times). These words were also common among the architects, even though associative conceptions were more frequent. Among the words that was by the architects was words and sentences like *cannot be copied*, *war!*, *Grr*, *closed* and *unwelcoming.*

4.7. Lindholmen

Picture 4

The fourth area to be presented in the questionnaire was Lindholmen. The willingness to take a walk in Lindholmen had an average of 3.5 points, the willingness to preserve the buildings had 3.3 points and the perception of the area as an attractive living environment resulted in 3.3 points. All below the neutral value of 4. Further statistics are presented in the tables below.

Table 10

	Average	Standard deviation	
Colourless - Colourful	3.8	0.9	
Few details - Many details	4.3	0.9	
Uniform - Diverse	3.8	0.9	
Contemporary - Traditional	1.4	0.7	
Global - Local	2.0	0.9	
Conventional - Original	2.8	0.9	
Large-scale - Small-scale	2.0	1.0	

Table 11

	Correlations				
		(Reppellent/Pleasant)	(Unfriendly/F	(Ugly/Beautiful)	
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.857**	.818**	
	Sig. (2-tailed)	.	.000	.000	
	N	222	222	222	
How do you experience these facades? (Unfriendly/Friendly)	Correlation Coefficent	.857**	1.000	.825**	
	Sig. (2-tailed)	0.000	.	.000	
	N	222	222	222	
How do you experience these facades? (Ugly/Beautiful)	Correlation Coefficent	.818**	.825**	1.000	
	Sig. (2-tailed)	.000	.000	.	
	N	222	222	222	
**. Correlation is significant at the 0.01 level (2-tailed)					

Table 12

	Correlations				
		(Ugly/Beautiful)	Stroll	Preserve	Live
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.688**	.641**	.611**
	Sig. (2-tailed)	.	.000	.000	.000
	N	222	220	221	221
Willigness to take a stroll in the area	Correlation Coefficent	.688**	1.000	.574**	.701**
	Sig. (2-tailed)	.000	.	.000	.000
	N	220	220	219	220
Willigness to preserve the buildings	Correlation Coefficent	.641**	.574**	1.000	.539**
	Sig. (2-tailed)	.000	.000	.	.000
	N	221	219	221	220
Perception of the area as an attractive living envoirenment	Correlation Coefficent	.611**	.701**	.539**	1.000
	Sig. (2-tailed)	.000	.000	.000	.
	N	221	220	220	221
**. Correlation is significant at the 0.01 level (2-tailed)					

4.7.1. Open question

The respondents in general used words like *modern* (65 times), *boring* (26 times), *office* (12 times) and *impersonal* (9 times). These words were also common among the architects, even though associative conceptions were more frequent. Among the words that was used by the architects was *capitalist*, *unintellectual* (interpreted as *anti-intellectual)*, *window-cleaning* and *no daylight.*

4.8. Stigberget

Picture 5

The fifth and last area to be presented in the questionnaire was Stigberget. The willingness to take a walk in Stigberget had an average of 4.9 points, the willingness to preserve the buildings had 4.8 points and the perception of the area as an attractive living environment resulted in 4.9 points. Further statistics are presented in the tables below.

Table 13

	Average	Standard deviation	
Colourless - Colourful	4.4	0.9	
Few details - Many details	4.7	0.9	
Uniform - Diverse	5.4	1.0	
Contemporary - Traditional	4.2	0.9	
Global - Local	4.5	0.9	
Conventional - Original	3.9	0.9	
Large-scale - Small-scale	4.1	0.9	

Table 14

	Correlations				
		(Reppellent/Plea	(Unfriendly/	(Ugly/Beautiful)	
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.875**	.807**	
	Sig. (2-tailed)	.	.000	.000	
	N	222	222	222	
How do you experience these facades? (Unfriendly/Friendly)	Correlation Coefficent	.875**	1.000	.855**	
	Sig. (2-tailed)	0.000	.	.000	
	N	222	222	222	
How do you experience these facades? (Ugly/Beautiful)	Correlation Coefficent	.807**	.855**	1.000	
	Sig. (2-tailed)	.000	.000	.	
	N	222	222	222	
**. Correlation is significant at the 0.01 level (2-tailed)					

Table 15

	Correlations				
		(Ugly/Beautiful)	Stroll	Preserve	Live
How do you experience these facades? (Reppellent/Pleasant)	Correlation Coefficent	1.000	.709**	.704**	.749**
	Sig. (2-tailed)	.	.000	.000	.000
	N	222	221	221	221
Willigness to take a stroll in the area	Correlation Coefficent	.709**	1.000	.620**	.779**
	Sig. (2-tailed)	.000	.	.000	.000
	N	221	221	220	220
Willigness to preserve the buildings	Correlation Coefficent	.704**	.620**	1.000	.716**
	Sig. (2-tailed)	.000	.000	.	.000
	N	221	220	221	220
Perception of the area as an attractive living envoirenment	Correlation Coefficent	.749**	.779**	.716**	1.000
	Sig. (2-tailed)	.000	.000	.000	.
	N	221	220	220	221
**. Correlation is significant at the 0.01 level (2-tailed)					

4.8.1. Open question

The respondents generally focused on the varying aesthetics of the area through words like *mixed* (31 times), *variation* (31 times) and *diverse* (20 times). Architects had a similar focus but with where generally more positive attitude towards the variation of styles. The architects were more likely to perceive the variations as a natural result of changes in construction methods, as it was described with words as *organic growth*, *authentic* and *co-existence.*

5. Analysis

In this chapter, theory within the fields of environmental psychology and marketing will be used to analyse the questionnaire and interview result. In Section 5.1 the previously identified attributes and their potential impact on perceived beauty is analysed. In section 5.2, the connection between green city branding or sustainability and perceived beauty is analysed. At last, potential differences between architects and laymen is discussed.

5.1. Preferences in the built environment

5.1.1. Colours

According to previous theory, scales in white, black and grey are rarely highly valued by laymen in general (Sternudd, 2007). Colourfulness is generally appreciated, where light and warm colours are preferred. It is also important that the colours are harmonious and not too intense or garish, as it is often perceived as ugly or intrusive (Granström & Wahlström, 2017). However, none of the represented areas should have had any problem with intense or garish colours, as the colouring of the facades are generally rather modest.

Jakriborg was perceived as the most colourful area with an average of 5.7 points, closely followed by Majorna with 5.6 points. Got Stigberget with 4.4 points, Lindholmen 3.8 and Masthugget 1.6. These numbers are closely related to the perceived beauty or ugliness of the respective areas, not only when it comes to how the areas are ranked in relation to each other but also when comparing their average. The biggest difference between perceived beauty and colourfulness of an environment was 0.7, as Jakriborg got 6.4 points in perceived beauty. However, an even higher rate of colourfulness could indicate that the colours are too strong or intense, i.e. points of the maximum rate (7) might not be desired. In the open question, Jakriborg and Majorna was described with words such as “colourful” and “colour”, while Masthugget and Lindholmen was described using words such as “grey” and “colourless”. Stigberget was described as both “colourful” and “colourless”.

The result of the survey and descriptive analysis confirms that environments that are colourful are generally preferred over those with sparser coloration.

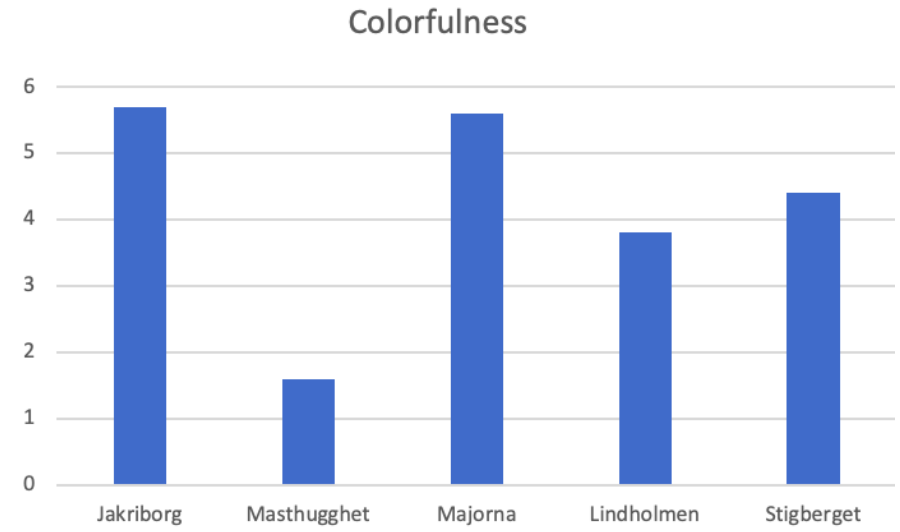

Figure 5

5.1.2. Details

According to previous studies, people generally prefer a high level of details but details that are too protruding are perceived as ugly (Sternudd, 2007). A building should appear as if they are built with care, rather than manufactured in an industry but for details to be perceived as beautiful, it is not necessary that are expensive or handmade, as long as they appear to be (Granström & Wahlström, 2017).

Jakriborg got an average of 5.8 points and was perceived as the area with the most details, followed by Majorna with 5.2 while Stigberget got 4.7, Lindholmen 4.3 and Masthugget 1.9. These numbers are closely related to the perceived beauty or ugliness of the respective areas, not only when it comes to how the areas are ranked in relation to each other but also when comparing their average. The biggest difference between perceived beauty and level of details of an environment was 0.8, as Lindholmen got 3.5, being perceived as closer to ugly than beautiful. This could indicate that that the details of this area are perceived as non-attractive.

The area that was perceived as most beautiful and had the most level of details, Jakriborg, was produced with industrial methods. This strengthens the conclusion of Granström and Wahlström (2017), that it is not necessary that the details are expensive or built with care, as long as they appear to be. Whether they are handmade or built with industrial methods, are less important.

The descriptive analysis indicate that the number of details affect the perceived beauty of an area, where many details are preferred over few details.

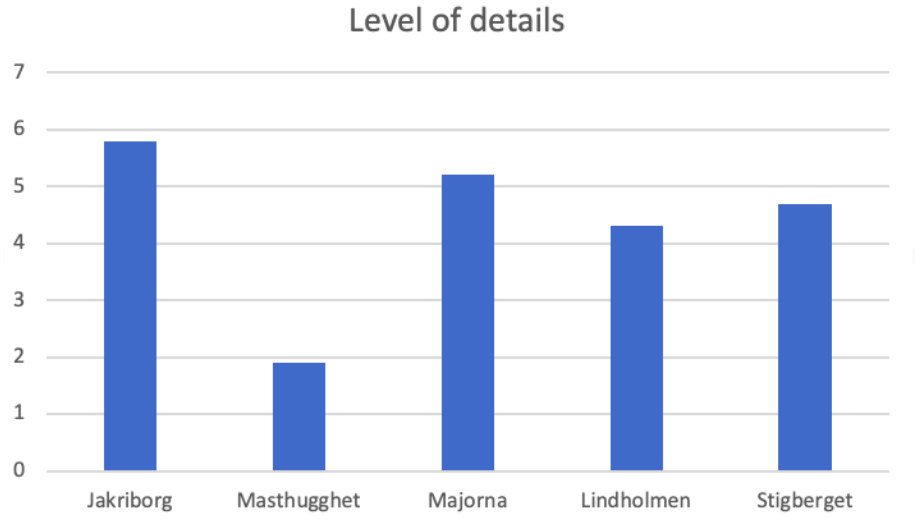

Figure 6

5.1.3. Variation

In order for an area to be perceived as attractive, the overall impression should be consistent and form a uniform and functional identity (Granström & Wahlström, 2017). However, there should also be some complexity and contrast since an environment that is to consistent will be experienced as boring. Too much complexity could lead to a chaotic impression. Therefore, an area with a good balance between uniformity and diversity should come close to the neutral value of 4.0, and extreme values should be avoided.

The most extreme values were Stigberget with an average of 5.4 points and Masthugget with 1.8. Stigberget overall got placed close to the middle on all other attributes, including

perceived beauty. A similar pattern was found in the article of Möller and Olsson (2018), where an old street with many later additions in different architectural styles suffered from a disenchanting effect. The high level of complexity and lack a uniform identity led to a chaotic impression, where many respondents chose to value the area as neutral. Stigberget on the other hand, was perceived as *to* uniform, lacking diversity. All other areas got less than 1 point from the neutral value of 4.0, where Jakriborg had 4.7, Majorna 4.2 and Lindholmen 3.8.

The descriptive analysis indicates to some extent that a balance between complexity and uniformity is preferred.

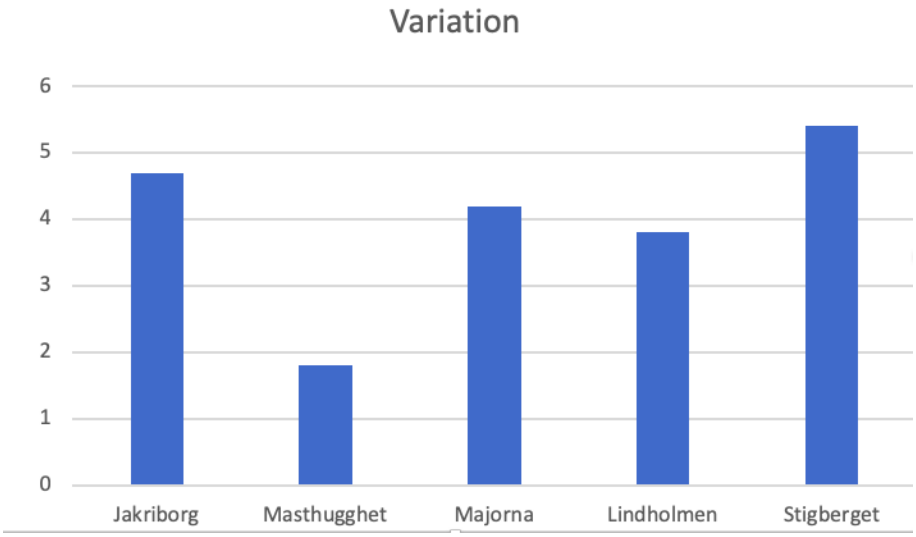

Figure 7

5.1.4. Style

According to previous studies people in general prefer a traditionally built environment over a modernistic environment, whether it is historical or modern (old or new), is not important (Sternudd, 2007) (Granström & Wahlström, 2017). This perception is strengthened by this study, as Jakriborg was not only most appreciated but also perceived as the most traditional built environment with an average of 5.9 points. Majorna, the overall oldest environment, followed with 4.6 points. The fact that Majorna was perceived as less traditional than Jakriborg could be explained by the fact that the facades in Majorna has been altered since they were first built. Also, Jakriborg is inspired by a style that was common centuries before the houses in Majorna was built. Stigberget got 4.2 points, which is close to the neutral 4, something that is excepted as it was represented by buildings in both traditional and modernistic styles. Both Masthugget and Lindholmen was seen as typical contemporary or modernistic, with 2.6 and 1.4 points.

These numbers are closely related to the perceived beauty or ugliness of the respective areas, both when it comes to how the areas are ranked in relation to each other but also when comparing their average. The biggest difference is that Lindholmen and Masthugget has switched places in the bottom, which could be explained by the fact that the word that was used in the questionnaire was contemporary instead of modernistic, this since people in general might not be familiar with the theoretic concept of modernistic architecture. Therefore, Lindholmen was seen as more contemporary than Masthugghet. However, both environments are by definition modernistic.

The descriptive analysis indicate that the number of details affect the perceived beauty of an area, where many details are traditional styles over modernistic styles.

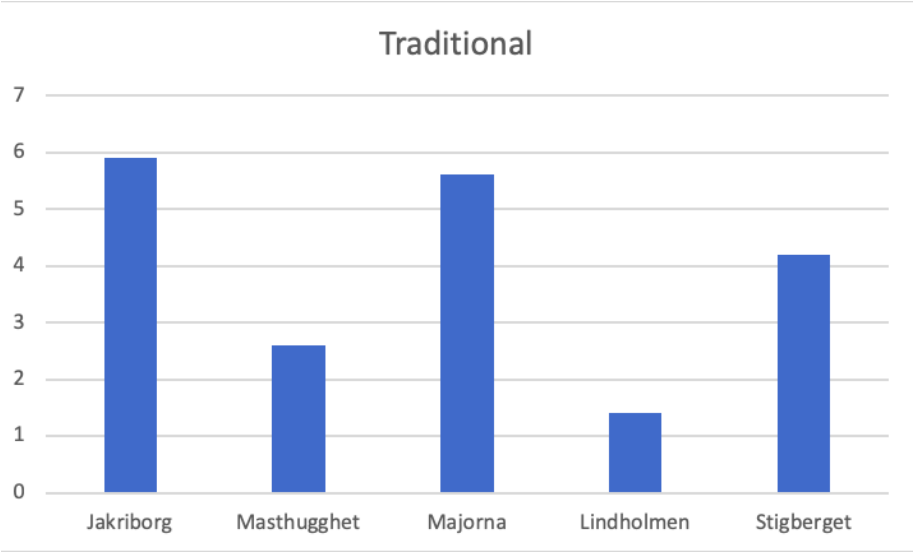

Figure 8

5.1.5. Global or local

Architecture that contribute to a strong sense of local identity has proven to be of great importance (Möller & Olsson, 2018). A respect for historical form, style and materials are generally appreciated. In order to be competitive a brand, in this place a place or a city, need to have a distinct and hard-to-imitate position in the customer´s mind, apart from having an attractive offer. A visual identity that is unique for a specific place, is a way of creating associations and mental images that distinguishes this place from other places. Consciously strengthening this position is called positioning (Dall'Olmo Riley et al., 2016), something that is considered a necessity within marketing (Trout & Rivkin, 1998). Gothenburg or Lund cannot take the same mental position as Tokyo or New York but should instead use their local distinctive advantage.

Majorna, with their characteristic Landshövdingehus, had the most local expression with an average of 5.7 points, followed by Jakriborg with 5.2. Stigberget, with a mix of Landshövdingehus and more typically contemporary contributions got 4.5. Both Masthugget and Lindhomen had a global expression with 2.7 and 2 points. This follows the perceived beauty or ugliness of the respective areas, when it comes to how the areas are ranked in relation to each other.

The result of the survey and descriptive analysis confirms that architecture with a local expression and a strong sense of place are generally preferred over architecture with a global expression.

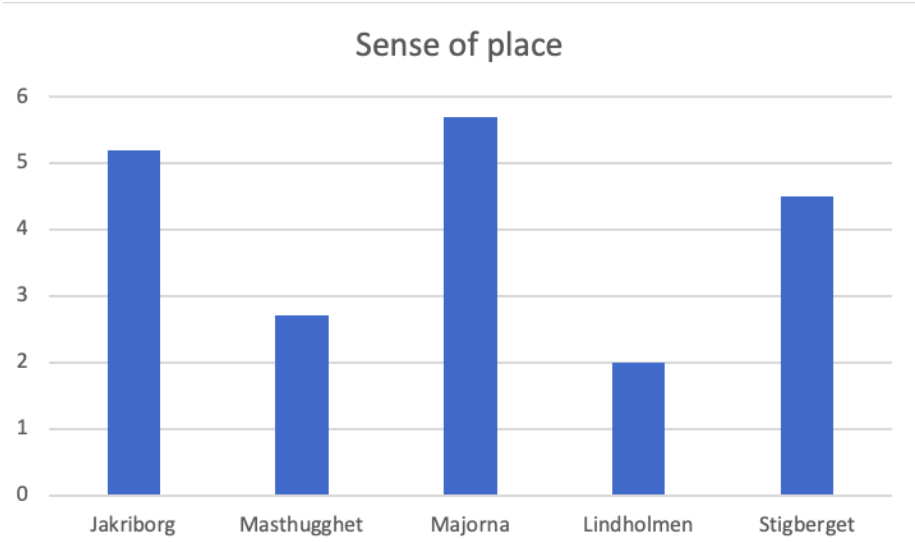

Figure 9

5.1.6. Originality

Previous studies have shown that traditional architecture is perceived as the most original, while modernistic architecture generally lack the details that makes it unique (Granström & Wahlström, 2017 (Möller & Olsson, 2018). The results of this study strengthen this adoption. Jakriborg was perceived as the most original, with an average of 5.3 points, followed by Majorna with 5.1 points. Stigberget, the mixed area, once again got close to the neutral number with 3.9 points. Lindholmen and Masthugget was perceived as conventional with 2.8 and 1.8 points. This follows the perceived beauty or ugliness of the respective areas, not only when it comes to how the areas are ranked in relation to each other but also when comparing their average. The biggest difference between perceived beauty and colourfulness of an environment was 1.1, as Jakriborg got 6.4 points in perceived beauty.

The result of the survey and descriptive analysis confirms that original architecture is generally preferred over conventional architecture.

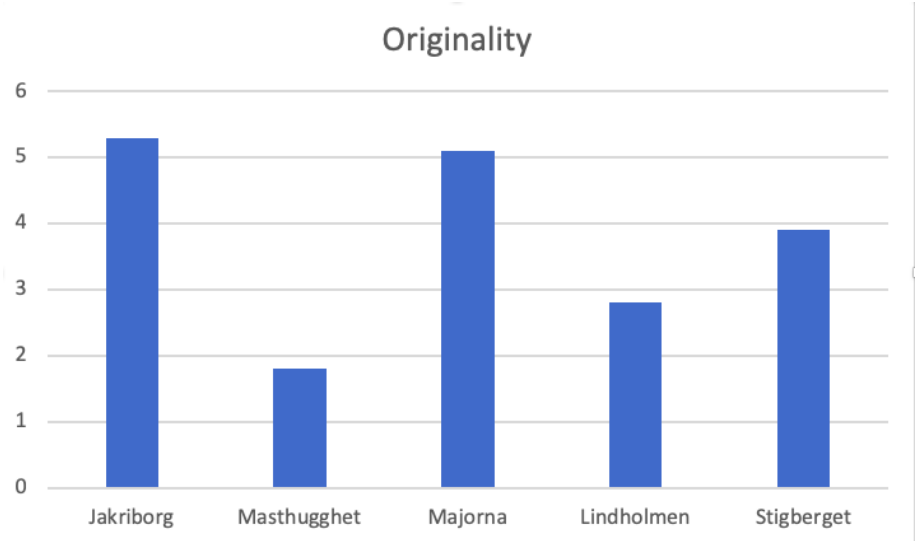

Figure 10

5.1.7. Scale
According to previous studies, environments that is perceived as small-scale is generally preferred, while large-scale environments elicit negative emotions (Granström & Wahlström, 2017). A buildings actual scale and the perceived scale must not be the same, as the aesthetics of the facades has an effect on the experienced scale. In this study, the environments with facades which aesthetics that might reduce the experienced scale are also the ones with the lowest buildings. Hence, Jakriborg with buildings between 2-4 floors, was perceived as the most small-scale environment with an average of 5.3 points. Second came Majorna, with three floor buildings, getting 5 points. Stigberget, with buildings between 3 to 8 floors, got 4.1 points. Lindholmen (4-7 floors) and Masthugget (5-6 floors) was perceived as large-scale with 2 and 1.9 points. This follows the perceived beauty or ugliness of the respective areas, when it comes to how the areas are ranked in relation to each other.

The result of the survey and descriptive analysis confirms that environments that are perceived as small-scale is generally preferred over environments that are perceived as large-scale.

5.1.8. Summary of the attributes impact on perceived beauty
The descriptive analysis of the mean values indicates that the greater level of the identified attributes an area contains, the more beautiful it will be perceived.

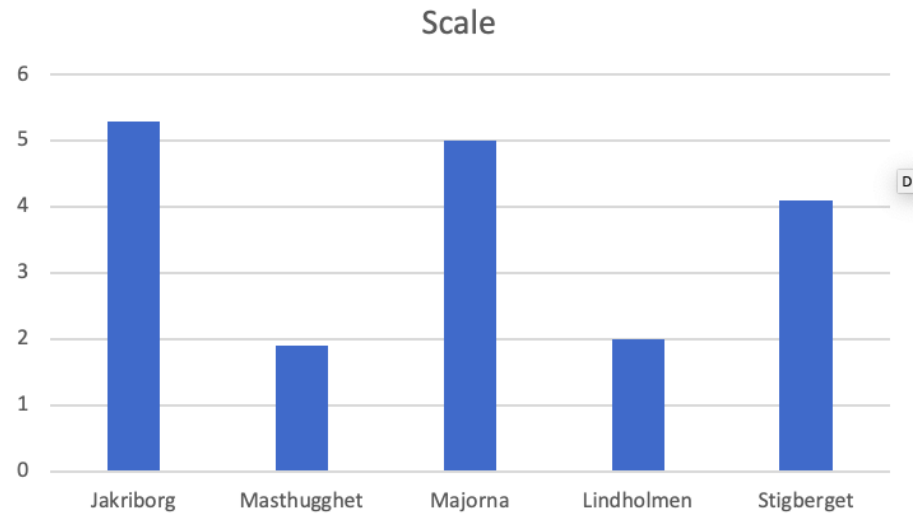

Figure 11

5.2. Green City branding
City branding means that marketing theory, which is originally developed for marketing products, is applied on cities Kavaratiz & Ashworth, 2004) and this concept become invaluable as a way for cities around to world to differentiate as competition between different places is growing (Hultman et al, 2016). People usually interpret their environment through three processes: planned measurements such as urban design of various kinds, through how people interact with sites and through various representations of the site, such as newspapers, articles, films or social media accounts. Thus, developing the city´s brand is different ways of influencing these cognitive images that people have of the city.

Sustainable urban development has increasingly been presented as an opportunity for cities (Bursch & Andeberg, 2015). As the environmental awareness grows, ideas about

sustainability has also affected marketing. Marin-Agilar and Vila-López (2014) suggests that two strategies for improving the city brand are gaining importance: firstly, experiential marketing, by arranging "unforgettable experiences", secondly through green marketing. As shown by Möller and Olsson (2018), cities could differentiate and strengthen their brand through architectural aesthetical design that contribute to beauty experiences, i.e. experiential marketing. However, this study also indicates that architecture that are perceived as beautiful could be used to address global environmental problems while creating durable development in economic and social terms, and thereby further strengthen the city brand. This will be further discussed below.

5.2.1. Beauty as a tool of sustainability

Although the general goal of sustainable development is quite precise, namely to address global environmental problems while creating durable development in economic and social terms, there is plenty of room for interpretation of how this can be implemented (Lawhon & Murphy, 2011). Based on previous research, satisfying people´s general aesthetic preferences could be related to all three pillars, something that will be discussed below. Further, the theme of this study could be related two of the 16 Sustainable Development Goals (SDGs) that were set by the international community as part of the UN 2030 Agenda for Sustainable Development. These are 3rd goal "Good health and well-being" (SDG3) and the 11th goal "Sustainable cities and communities" (SDG11).

A Spearman's rank correlation coefficient was used to examine whether the antonyms repulling–appealing, unpleasant-pleasant correlates with the antonyms ugly – beautiful. This test was done individually on all areas. The result of the tests indicated that there is a significant positive relationship, with correlation coefficients between 0.712 and 0.855. The correlations are significant at the 0.01 level (2-tailed). In other words, if a person founds an environment beautiful, the same person will most likely also find the environment appealing and pleasing.

Another Spearman's rank correlation coefficient test was then used to examine the correlation of the level of perceived beauty with the willingness to take a walk in the different areas, the willingness to preserve the buildings of the different areas and the perceived attractivity of the environments as living environments. Something that will be discussed below.

5.2.2. Social

The aesthetics of our living environment affect our emotional state, where perceived beauty or ugliness can affect not only our mental but also our physical well-being (Svensson & Johansson, 2005) (Alfvén, 2016) (Seresinhe et al., 2017). The aesthetics of the Million Homes Programme has also been criticised for being monotonous and unattractive, and thereby not encouraging to physical movement or spontaneous walks, something that further affects our physical and mental well-being (Alfvén, 2016). This could be related to the 3rd Sustainable Development Goal (SDG3) called "Good health and well-being" which aims at globally improving everyone´s health and well-being in the world.

The results of this study strengthen the perception that our living environments aesthetics could encourage or discourage to physical movement. Jakriborg was found to be the most attractive environment for a stroll, with 6.5 points, followed by Majorna with 5.8 points. Stigberget got 4.9, while both Lindholmen and Masthugghet was perceived as an unattractive environment for a stroll, with 3.5 and 1.9 points.

The Spearman's rank correlation coefficient shows that there is a positive relationship between the level of perceived beauty and the willingness to take a walk with correlation coefficients between 0.605 and 0.709. The correlations are significant at the 0.01 level (2-tailed).

Hypothesis 1 is confirmed. There is a positive relationship between perceived beauty and people´s willingness to take a stroll in the area.

5.2.3. Environmental

According to Keller (2012), the green movement fails to achieve its goal of sustainability, because it falls short of nurturing the physical and mental benefits that create emotional attachment to place in the first place, and then motivates people to care for their constructions and retain them over the long term. The results of this study strengthen the idea is that people are more willing to retain, care for and find new areas of use for a building that they find beautiful and are emotionally attached to, while buildings that are perceived as ugly are more likely to be torn down and replaced. The environments that the respondents were most willing to preserve was Jakriborg with 6.4 points, followed by Majorna with 6.0 points. The mixed area of Stigberget got 4.8 points, while the willingness to preserve Lindholmen and Masthugget was rather low, with 3.3 and 2.2 points.

There was a positive relationship between the level of perceived beauty and the willingness to preserve the buildings of the different areas, with a correlation coefficient between 0.564-0.704. The correlations are significant at the 0.01 level (2-tailed). Building beautiful buildings,

Hypothesis 2 is confirmed. There is a positive relationship between perceived beauty and people´s willingness to preserve a building.

5.2.4. Economic

Previous research indicates that architecture that contains the identified attributes, are not more expensive to produce than architecture without these attributes (Granström & Wahlström, 2017) (Buitelaar & Shilder, 2017). However, people are generally willing to pay more for living in buildings that are perceived as beautiful. The results of this study support the idea that beauty is a relevant factor when we choose where to live. The environments where people were most willing to live was Jakriborg with 6.3 points, followed by Majorna with 5.9 points. Stigberget got 4.9 points, while Lindholmen and Masthugget got 3.3 and 2.0 points.

There was a positive relationship between the level of perceived beauty and the perceived attractivity of the environments as living environments, with 0.571-0.749. The correlations are significant at the 0.01 level (2-tailed).

Hypothesis 3 is confirmed. There is a positive relationship between perceived beauty and people´s willingness to live in the area.

5.2.5. Summary

Through the identified attributes it is possible to create an emotional appeal or an increased perceived value. The human species have five basic senses that send information to the brain to help us understand and perceive the world around us, where sight carry the most weigh in our perceptual apparatus visual view or our surroundings (Sussman & Hollander, 2014). This

study suggests that designing buildings that are perceived as beautiful could be used to address global environmental problems while creating durable development in economic and social terms. As environmental awareness and competition between places grow this could also be used as an important factor when it comes to creating an attractive city brand, and thereby gain reputation and competitive advantage.

5.3. Architects and laymen

Even tough architects in general valued modernistic environments slightly higher, and traditional environments slightly lower, than laymen, both groups had a similar evaluation pattern. Even though architects were more likely to appreciate an environment that is generally disliked, something that is expressed by the fact that architects had a high standard deviation connected to how beautiful the area of Masthugghet was perceived, the average score is still low within both groups. In general, both architects and laymen appreciate architectural aesthetics containing the identified attributes. However, there are some differences between the groups that will be discussed below.

5.3.1. Authenticity

A distinct feature of the modern consumer society is the increased rationalization of production and the construction industry is no exception. When brands perform these rationalization processes, they often lose its so-called enchantment, which ultimately leads to a loss of authenticity (Hartmann & Ostberg, 2013). The early movement of modernism could partly be seen as a response to this development, where architecture and urban planning would adapt to modern production methods. The internal scheme would determine the aesthetics of the building, creating large-scale, minimalistic blocks with repetitive patterns. This search for transparency should partly be understood through the fact that it took place in the wake of World War I, where modern machine- and mass culture was embraced, but also as a search for authenticity. However, as found in this study, modernistic environments were generally disfavoured while pre-modernistic (traditional) environments were generally appreciated. As mentioned by Hartmann and Ostberg (2013), authenticity and enchantment is often seen as synonyms but there are important differences. Modernistic environments might be perceived as authentic, but their unattractive aesthetics could have a negative and disenchanting effect, even though the authenticity remains.

Authenticity is constantly exposed to various enchantment discourses as the market interprets the brand. With rationalization, brands often lose their cultural, mythological and romantic parameters that existed in an earlier era. However, the most popular environment, Jakriborg, was an environment built through industrial methods but with traditional, or pre-modernistic, aesthetics. In this case, the streets are reminiscent of medieval street grid that remains in the city centres of Scania, while the architecture is traditional containing Dutch and German influences. This could also be related to the article of Hartmann and Ostberg (2013), where they describe how a brand recovered their lost enchantment by alluding and repeating craft discourses. By alluding on the brands Swedish crafts heritage through various enchanting discourses, the company succeeded in reversing public opinion in the market on regain its authenticity despite outsourcing production to China. This shows that the products do not have to be crafted at home, but that the authenticity itself is culturally implicit perceptions. As mentioned earlier, a building should appear as if they are built with care, rather than manufactured in an industry but for details to be perceived as beautiful, it is not necessary that are expensive or handmade, as long as they appear to be.

However, there is a discourse within the profession where it is not allowed to use historical buildings as role models when designing new buildings. In the study of Catharina Sternudd (2007), laymen and architects were asked to grade a classical building. Both groups liked the building, but when they were told that the building was constructed recently, the architects changed their opinions while the laymen did not. This could be related to authenticity, where architects find that buildings with a classical idiom are not authentic if they are built in the modern age (Nasar, 1998). A similar pattern was found in this study, where a clear majority of the architects that were not able to identify Jakriborg described the area using words with neutral or positive connotations, like beautiful, traditional, cosy and humane. Even though a few of the architects that were able to identify the area agreed, a clear majority of the descriptions within this group was that it was not authentic, i.e. *pastiche*, *false*, *Disneyland*, *tragic*, *comical* and *kitsch*. A similar pattern could not be found among laymen.

Further, architects that were able to identify Jakriborg, i.e. most likely to recognize as being built in the modern age, trough the open question valued that area lower than other groups. with 4.8 points, i.e. being percieved as the third most beautiful area. This could also explain why the standard deviations (variation) within the group of architects was consistently higher than the standard deviations within the group of laymen, a pattern that was exclusive for Jakriborg.

This strengthens the view that there is a discourse within the profession where it is taboo to use pre-modernistic buildings as role models when designing new buildings. There is a view that architecture must reflect its own time and thus not get to be retrospective. Violation of this prohibition is ridiculed by means of derogatory epithets, indicating that it is false or ridiculous. This comes from a modernistic discourse related to historical prediction, where history is divided into eras that follow each other according to historical laws, where all eras are completely unique and everything in each epoch is typical of this particular, and only this, epoch. The idea is that when it is possible to identify from which era or epoch a building originates solely through its aesthetics, this will increase the understanding of the area's history and thereby create an added value among the residents or visitors.

However, Möller & Olsson (2018) found that an older area with extensions in many different styles from different epochs had lost its enchantment. Here, Stigberget becomes an interesting example as the area has had a similar development. Stigberget originally consisted of buildings similar to those of the second most popular area (Majorna), but the newer additions have led to a disenchantment. The newer buildings cause a negative cognitive intrusion, which can ruin the perceived authenticity (Hartmann & Ostberg, 2013) (Möller & Olsson, 2018). This problem can also be related to the article "4As of retro branding" (Brown et al., 2003). A brand, or a place in this case, are partially understood through storytelling, where *Allegories* (narratives) are linked to the brand or area. For Stigberget, these narratives are constantly changed when new buildings are added. *Arcadian*, the ideal image that the brand is strive for, must be adapted to the new additions (and vice versa) without the *Aura*, what makes the place unique, disappears. The very diverse stories that are expressed by Stigberget could be perceived as conflicting and confusing. This is related to the last A in the model, *Antinomies*, or contradictions. The different styles and messages represented neutralizes the positive perceptions that the street previously had. This is also strengthened by the open question, where the respondents focused on the amount of variation and the mixed feelings that it caused. However, architects in general had a more positive attitude towards the mixing of styles. The architects were more likely to perceive the variations as a natural result of

changes in construction methods, as it was described with words as *organic growth, authentic* and *co-existence.*

5.3.2. Storytelling

When it comes to adapting new additions to existing buildings it should also be mentioned that architects, according to the Sternudd (2007), usually have conceptual or associative references, while laymen in general have visual references. This means that a new addition could differ significantly visually from the existing buildings, but it is assumed that a conceptual reference (e.g. the choice of colour refers to the art of a famous painter who was born in the area) together with the ability to identify the building epoch and construction method through the architectural aesthetics will generate an added value. However, to experience this potential added value one must poses some prior knowledge about architectural history in general and/or the architects' conceptual ideas behind specific buildings. The inaccessible nature of this potential added value could partly should be considered. This pattern, where architects have conceptual or associative references while laymen have visual references, could also be applied on their laymen's taste preferences as a whole. In general, architects were more likely to describe the different facades with words that are not directly related to their aesthetics (e.g. *subsistence level, fruit and vegetables, snobby, conflict-creating, war*!), while laymen almost exclusively used words to describe the aesthetics or their emotions connected to the aesthetics. This could indicate that even though all humans are partially dependent on their limbic system when coding their aesthetical environment (Zajonc, 1980), architects generally are more likely to use the conscious part of the brain where more sophisticated aesthetical valuations take place.

This could also explain why the construction year is so influential when it comes to architect's assessment of a building's aesthetics. Architects have learned to associate certain aesthetics with certain narratives. Laymen tend to asses buildings based on their aesthetical qualities, i.e. what they see, or their emotions connected to while architects are more likely to assess the buildings on the basis on associations.

Assumption 1 is partly confirmed.

Storytelling could also be connected to the importance of architecture that contributes to a strong sense of place. Storytelling refers to communication means that take various forms depending on the medium, in this case through architectural design. Narrative is the ability of the mind to create stories and, in the process, find multiple ways of linking to the environment and securing a place in it. According to Sussman and Hollander (2014) people consistently look for orientation and connections to their environment. We look for ways to make attachments and derive meaning from our physical surroundings. In other words, every plan and urban design has the potential to acknowledge and respond to this trait in some way or another. Architecture that has a local expression contributes to a strong sense of place, which could explain why it was preferred over a global expression.

5.3.3. The progress of architecture

The modernist ideology and architecture were initially a way of breaking free from existing rules and conventions in architecture, where focus on time and innovation would facilitate a broader transition to industrial constructions. However, after 100 years in existence modernism has created its own rules and conventions. Despite the idea that architecture should reflect its own time, there are great similarities between today's architecture and early modernism, e.g. with sparsely use of ornament and colours, flat roofs, repetitive modular

forms and the use of flat surfaces, often alternating with areas of glass. The general differences between architects and laymen in terms of taste preferences suggest that these preferences are to some extent culturally formed, and therefore can vary between individuals, between cultures and over time. However, as this and several other studies have shown, man has not learned to appreciate modernist or contemporary architecture, as pre-modernist, or traditional, architecture is still generally more appreciated. This was true for both architects and laymen.

As a species, we have learned to decode our environments through our ancestors, something that is referred to as the limbic system. People have multiple subconscious tendencies and behaviours that govern their response to the environment (Sussman & Hollander, 2014), where the human mind forms aesthetical valuations about its surroundings very fast and without reflection. The rules and conventions related to traditional architecture was shaped through trial and error during thousands of years to please our limbic system, which could explain why traditional or pre-modernistic architecture often have all the attributes that people in general find pleasing. The human brain prefers environments with recognizable forms, which leads to positive emotions such as a sense of security and relaxation. On the other hand, the brain gets stressed when it can´t decode and understand the environment.

An awareness on how people decode and understand their living environment could be crucial when building a sustainable world. In this study, a number of attributes that people in general find pleasing have been identified. However, using these attributes when designing new environments does not mean that new architectural expressions can´t thrive or develop. Even if all these attributes are included when designing a new building, there is still an infinite room for maneuver and a possibility of a large variety of different architectural expressions. Further, an area or a building does not necessarily have to include all the attributes to be found aesthetically pleasing, although there is a connection between how many of these attributes an area contains and how attractive the area is perceived. Thus, different attributes could be excluded depending on the specific case and context. This means that there is still an endless number of different architectural expressions and styles available.

The decision-making regarding exterior architecture falls to municipalities, builders and architects. Residents and visitors of a city are rarely consulted about their preferences. This separates urban design from virtually all other products where companies are actively seeking to satisfy the end user. One of the cornerstones of marketing theory is consumer orientation. To originate from a marketing theoretical point of view on how to create authenticity and enchantment where it to a greater extent is allowed to use traditional design principles might conflict with a view that is common within the profession. Namely that every epoch has a true architectural expression that is typical of that, and only that, epoch. However, using these design principles, or attributes, does not mean that architectural expression can´t vary between different epochs. Rather, the study suggests an alternative approach where focus lies on satisfying the end user, in this case anyone who visits (consumes) the area, where the ability of architecture to reflect its time as a by-product and not necessarily something that needs to be actively interpreted or sought. It is still likely that architectural aesthetics will shift, but as a natural consequence of accumulated knowledge, technological advancements and trends.

5.4. Implications

This study suggests that it is important to take people´s general aesthetical preferences into account when it comes to designing the built environment. The idea that building environments that are perceived as aesthetically attractive are an important part of creating a

sustainable city and attract new visitors and residents has been strengthened. It is confirmed that the attributes identified through previous research is important when it comes to creating an aesthetically attractive environment. Further, this study creates a deeper understanding for the gap in preferences between architects and laymen. The conclusions of this study could be used by municipalities, developers and architects when it comes to decision-making regarding exterior architecture.

6. Conclusion

The conclusion will first provide a short answer to the four research questions, before suggestions on future research is presented.

It is possible to create added value through exterior architecture. Through previous studies, a number of attributes that should contribute to creating this added value was identified. These attributes were tested on new empirical areas, and the result further strengthened existing theories about the importance of these attributes. The preferences that were identified are listed below:

- **Colourful**

Environments that are colourful, but not garnish, are generally preferred over those with sparser coloration.

- **Many details**

Many details are preferred over a few details. A building should *appear* as if they are built with care, rather than manufactured in an industry. For details to be perceived as beautiful, it is not necessary that are expensive or handmade, as long as they appear to be.

- **Diversified with an overall identity and order**

A balance between complexity and uniformity is preferred. An environment that is to consistent will be experienced as boring, while too much complexity could lead to a chaotic impression.

- **Traditional styles**

People in general prefer a traditionally built environment over a modernistic environment, whether it is historical or modern (old or new), is not important.

- **A sense of place**

Architecture with a local expression and a strong sense of place are generally preferred over architecture with a global expression.

- **Original as in unique**

Original architecture is generally preferred over conventional architecture. Traditional architecture is perceived as the most original, while modernistic architecture generally lacks the details that makes it unique.

- **A feeling of small-scale**

Environments that are perceived as small-scale is generally preferred over environments that are perceived as large-scale.

6.1. Green City Branding

Further, it was found that this added value could contribute to building an environmentally, socially and economically sustainable society. Previous research shows that the aesthetics of our living environment affect our emotional state, where perceived beauty or ugliness can affect not only our mental but also our physical well-being. This study further shows that the aesthetics of the built environment could increase or decrease the willingness to take a walk, something that are of further importance when it comes to our physical and mental well-being. The aesthetics are also important when it comes to creating emotional attachment to a place or a certain building, which motivates people to take care for their constructions and retain them over the long term.

Previous research indicates that architecture that contains the identified attributes, are not more expensive to produce than architecture without these attributes. Instead, people are generally willing to pay more for living in buildings that are perceived as beautiful. The results of this study further support the idea that beauty is a relevant factor when we choose where to live.

As environmental awareness and competition between places grow this could also be used as an important factor when it comes to creating an attractive city brand, and thereby gain reputation and a competitive advantage.

6.2. Architects and laymen

There were no significant differences between architects and laymen's taste preferences. Contrary to what previous studies suggested, both architects and laymen in general appreciate architectural aesthetics containing the identified attributes. However, architects tend to have conceptual or associative references, while laymen in general have visual references. The two groups also have different views on what is authentic and what is not, where architects are more likely to perceive traditional architecture built in the modern age as non-authentic.

6.3. Future research

-A more extensive quantitative study as a way of further examine differences in how architecture is perceived between groups.

-A qualitative interview study as a way of deepening the understanding for the identified differences in how architecture is perceived between groups.

- Are there any challenges to implementing these attributes? If so, how could these be conquered?

-How important is a *green* city brand as a factor when people choose where to live or what places to visit?

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8. Appendix

This part is intended to give the reader further background information to the problem that this thesis addresses. The history of human species and cities introduce the chapter, followed by the birth of the modernistic movement and its establishment in Sweden. After that, the critique on modernist architecture will be described before the postmodern reaction and its backlash is presented.

8.1. The human species and cities

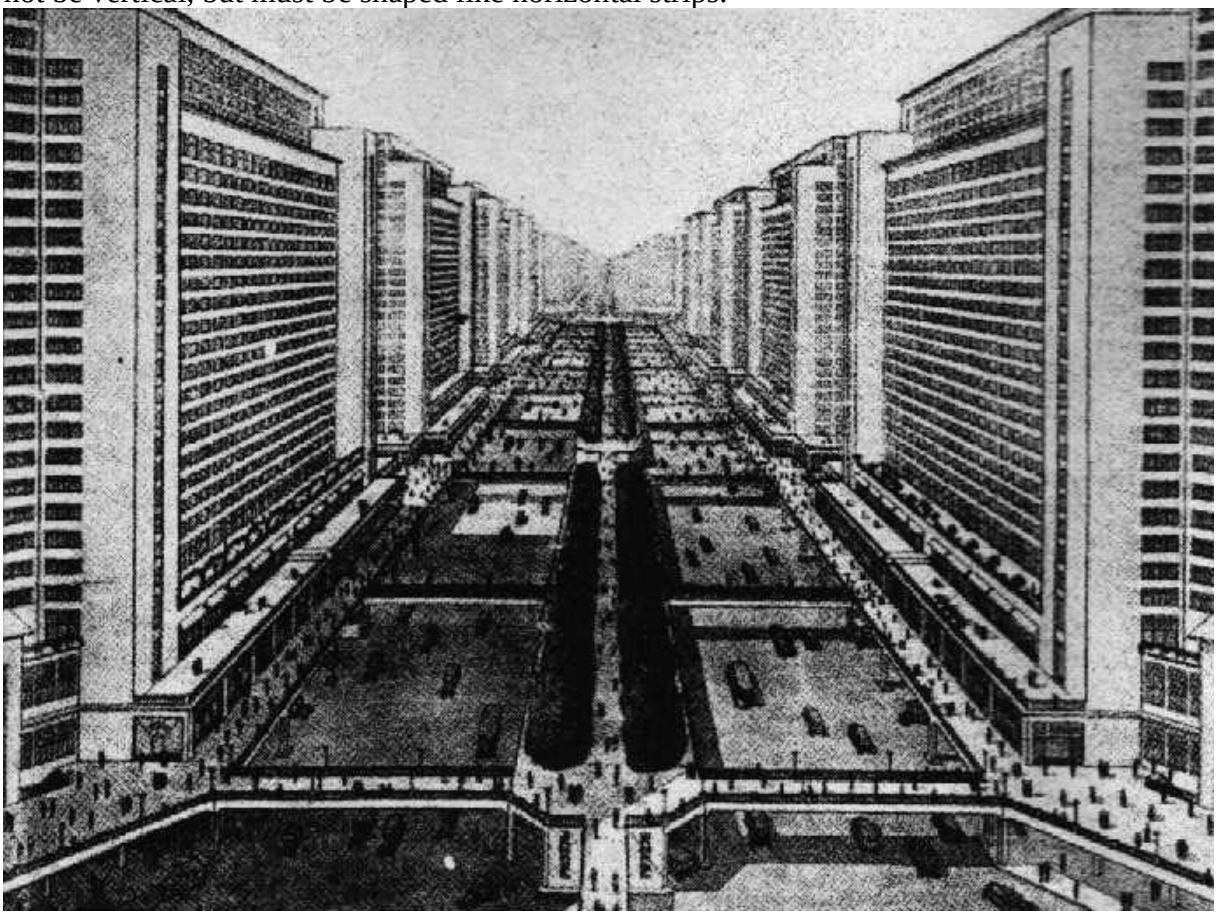
About 3.6 billion years ago, the first life appeared on planet Earth (Sussman & Hollander, 2014). About 2 million years ago, several species of human-like creatures roamed the landscape, where our own species appeared around 200 000 years ago. Our first cities were built around 6000-8000 years ago (Sussman & Hollander, 2014) (Memborn, 2010). The density of cities facilitates interaction between people, business and government organisations. Historically, city-dwellers have been a small proportion of humanity overall, but after two centuries of rapid urbanisation, roughly half of the world population now live in cities. Never before have so many people lived in a man-made environment, an environment that we were not designed to live in (Sussman, 2014). From a historical perspective, man-made environments have been built to be experienced through walking speed and aesthetics has sought to imitate natures design. Aesthetic element in nature includes inspiration from all sorts of organisms, as well as numerical laws of chaos theory, fractals and other advances in science and mathematics. Attributes that it also found in premodern design.

8.2. Motorism and the new architecture

Almost a hundred years ago, the basic principles of architecture and urban planning that had been used for 8000 years changed drastically (Memborn, 2010). About 1920, a man called Le Corbusier was standing on the boulevard Champs Élysées in Paris (Alfvén, 2016). What only two decades ago was a pleasant street was now full of honking cars and gridlocks. Later, he finds that France had gone from 1762 cars in 1899 to around 360 937 in 1922. He concludes that the exponential increase of traffic will continue to affect accessibility and that the city of Paris needs a new plan. Le Corbusier would later be considered as one of the pioneers of modernistic architecture.

In 1925, Le Corbusier developed the basic principles of the modernist urban planning through his proposal “Plan Voisin”, where he planned to demolish the northern part of central Paris and replace it with gigantic housing volumes sparsely placed with a 12-lane highway between the buildings (Memborn, 2010). The plan was named after the French luxury car manufacturer Voisin, emphasizing that cars and motorism was central to his ideas on urban development. The pedestrians would be removed from the street and replaced by cars (Andersson, 2009). The new, modern town would have a big centre for administration and business together with straight, wide, mile long-streets that extend to suburban areas where there were long rows of houses with similar appearance (Alfvén, 2016). Following his machine aesthetic, modernist buildings would reject decorative motives while emphasizing pure geometrical forms. The new style of architecture would be so simplified that motorists would be able register the full aesthetics of the buildings when whispering past them on the highway. Le Corbusier saw buildings as sculptures in the urban landscape, and as such they should be considered at a distance, from the highway, a boat or an airplane (Andersson,

2009). Former aesthetic ideals were rejected and replaced by new ones, i.e. windows should not be vertical, but must be shaped like horizontal strips.



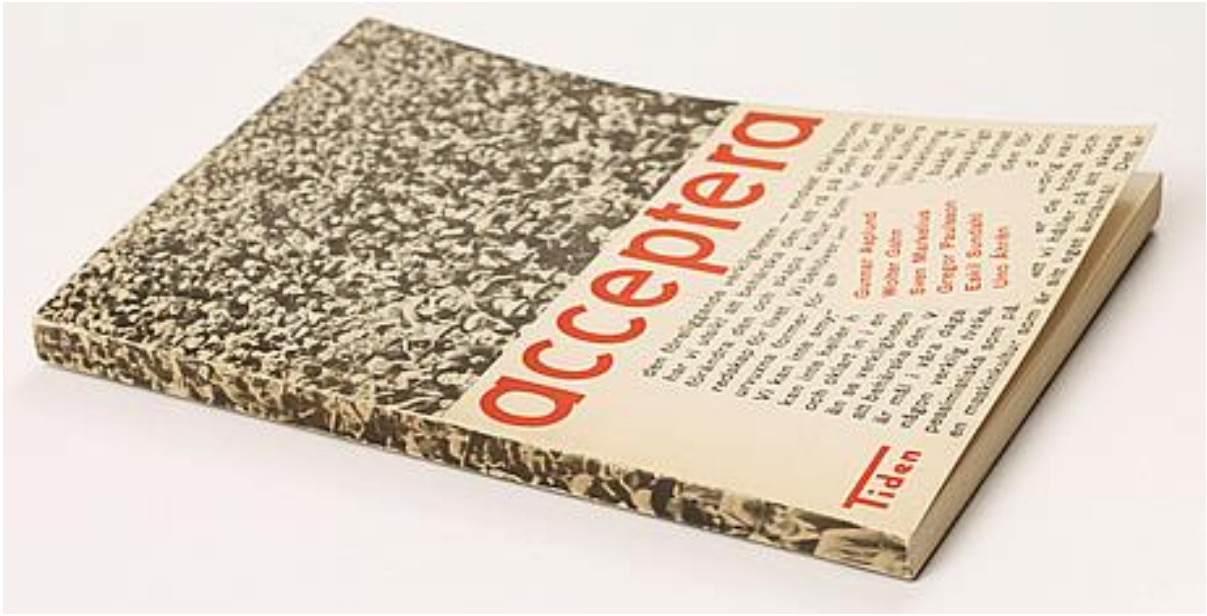
Picture 6 - Plan voisin

Modernist architecture emerged from relations in technology, engineering and building materials and early modernist architects and designers, such as Frank Lloyd Wright and Le Corbusier, believed that new technology rendered old styles of buildings obsolete (Memborn, 2010). Modernism was *the* new architecture, the only architecture adapted to humans in the modern machine- and mass culture (Alfvén, 2016). Modernism took credit for the technical and social progress of the 20th century, and criticising the style became synonymous with opposing these advancements (Rosenhall et al., 2019). Le Corbusier linked 'old' architecture to bad health and immorality and he meant that the new architecture would help create a new order (Alfvén, 2016). Since the speed of the car facilitated a greater distance between buildings, arguments about the importance of fresh air and direct sunlight was linked to modernist architecture and planning. The ideas of Le Corbusier and other modernist philosophers helped shape the concept of what hereafter would be defined as modern architecture and modern urban planning.

8.3. Modernism in Sweden

In 1931, Swedish architects Uno Åhrén, Sven Markelius, Eskil Sundahl, Wolter Grahn, Gunnar Asplund and art historian Gregor Paulsson released a modernist manifest, called Acceptera ("Accept"). Their basic thoughts and the polarizing language – between the insightful and those who are behind their own time – was influenced by Le Corbusier and the German modernist movement of Bauhaus (Alfvén, 2016). The old city should be demolished and replaced with mass-produced buildings and fast transports. These architects also had, or

developed, positions where they were able to influence the design of the future urban development. As an example, municipalities were allowed to issue bans on renovation, additions and new buildings as a way of preparing for the future ‘sanitation’ of Swedish cities.



Picture 7 - Acceptera

A couple of decades later, Sweden suffered from a housing shortage and the plans was realised through the Million Homes Programme (Miljonprogrammet), where the aim was to construct a million new dwellings during the programme´s ten-year period. Through what was later known as rivningsvågen (“the wave of demolition”) historical parts of the Swedish city centres was vanished, and the working class was moved to newly developed suburbs, increasing people´s dependence on automobiles (Alfvén, 2016). In Stockholm, the redevelopment of Norrmalm was regarded as one of the larger and most full-of-character of all city renewals in Europe in the aftermath of World War II, even including the cities that were severely damaged during the war. In Gothenburg, over fifty percent of all buildings in the inner city was demolished (Laurits et al., 2019). The idea of the Million Homes Programme is often connected to the Swedish Social Democratic Party, but there was no real political opposition. In fact, Folkpartiet (Swedish People´s party) and Högerpartiet (Right Wing party) wanted an even higher production of new homes. It is also important to understand that it is a vision that had been well established within the Swedish architectural elite for decades, and that it was inspired by Le Corbusier´s ideas (Memborn, 2010) (Alfvén, 2016). The responsibility for this revolutionary change of Swedish urban landscape with the support of new laws was borne by a rather small group of just ten architects who have entrenched themselves great power in various consultative bodies.

Picture 8 - A street in Gothenburg before and after the demolition wave. This picture is taken in the corner of Styrmansgatan and Karl Johansgatan.

8.4. Critique on modernist areas

According to the vision, the new modernist housing would promote health and good morals (Alfvén, 2016). However, it did not take long until the project got widely criticised. As the Million Homes Program had reached barely half-way, the housing shortage was replaced by a housing surplus, which was partly caused by the rapid expansion of the housing stock and by the fact that economic growth gave way to stagnation (Vidén & Hall, 2005). At the same time, the programme started to receive critique concerning the exterior architecture which was perceived as uniform and poor. Le Corbusier saw houses as machines to live in, in line with his perception of cars as machines to travel in, and the Million Home Program shared this view on architecture. Lennart Holm, a famous city planner who was in charge of the program, saw houses as square systems that are produced with firmness and consistency and that it is the internal scheme that determines the aesthetics of the buildings (Alfvén, 2016). Le Corbusier and the authors of 'Accept' claimed that modernist architecture would bring healthy, happy people on high moral ground in well-functioning cities to a low cost.

However, these new residential areas did not only receive verbal criticism but since they were not adapted to the market or people´s general preferences, the one´s that had the possibility left these areas, further reinforcing segregation. Modernist assumptions about health, happiness and morals lacked scientific support. In fact, morbidity, mortality and criminality is *higher* in these suburbs than in other areas. The perceived unattractiveness leads to the inhabitants of these area consisting of people that does not have any other choice, which has led to social and economic segregation.

8.5. The postmodern reaction – and backlash

In the early 1980´s, postmodern architecture made its entry in Sweden. The Million Home´s programme abrupt transition into an energy crisis and a housing surplus prompted a questioning of large-scale operations and motorism (Rosenhall, 2020). Postmodernism wanted to mark the end of great programs of the post-war and social engineering. Aldo Rossi, Ricardo Bofill and Robert Venture were the fixed stars of the time and their visions of a seamlessly fragmented architecture where borrowing attributes freely from history emerged as an obvious way for the future. However, in only about a decade, the postmodern movement was reduced to history. Within the architect profession, the aesthetics of the postmodern movement was seen as dishonest and non-authentic. This in contrast to the previous modernistic aesthetic ideals, that was still perceived as both honest and authentic. Typical modernistic attributes such as minimalism, a rejection of ornament and colour, repetitive modular forms and the use of flat surfaces still to this day dominate contemporary architecture, while there are recent examples of "historical" architecture being banned in zoning plans (Göteborgs-Posten, 2018). Yet, the exterior architecture of today is frequently debated in newspapers as well as on social media, where a growing dissatisfaction can be anaesthetised (Granström & Wahlström, 2017).

As Sweden once again face considerable housing shortage in many growing cities, developing this large housing stock with care for its qualities and its residents, and learning from the mistakes when developing new environments, is important.