

Rethinking 'Nieuwe Truttigheid'

What criteria should guide energy performance driven housing renovation of younger mass housing complexes, tested on the case of Goedewerf, that acknowledge the 70's aesthetic fundamentals?

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‘Hoe zorg je ervoor dat er in Nederland genoeg wordt gebouwd, en hoe zorg je, vind ik ook erg belangrijk, dat er mooi wordt gebouwd (...) waarbij je iets neerzet wat er niet voor dertig of veertig jaar staat, maar voor de lange termijn.

Milieutechnisch trouwens ook prettig, met alle moderne recyclingtechnieken daarop toegepast.’

Prime minister Mark Rutte at the *Algemene politieke beschouwingen* 2021 (Tweede Kamer, 2021)

Introduction

During the last Algemene politieke beschouwingen, prime minister Mark Rutte put forward what he thinks should be the ideals of social housing, an opinion he shares with Amsterdam alderman Wibaut (1859-1936). Firstly, there must be enough housing, meaning people in professions such as the police and nursing should be able to live in the city they work in, and secondly, it must be beautiful, meaning people will still be satisfied with its aesthetic in 30 or 40 years' time. In his comment, Rutte connects the aspect of aesthetics directly with its lifespan, and thus sustainability. Two subjects that are extremely important today; how to build one million houses before 2030 and how to ensure they are sustainable. According to the IPCC sixth assessment report drastic reduction in our environmental impact needs to happen. Every year, just under a thousand buildings are upgraded to energy-neutral or energy-positive. To meet the 2050 targets this needs to be at least a thousand (TNO, n.d.). Of the entire housing stock in the Netherlands, 31% was built between 1965 and 1985 (CBS, 2021). This means a significant part of the entire building stock is the Post 65 building stock. But is Post 65 housing stock valued by the Dutch public? Many Post 65 neighbourhoods face social problems of liveability and demographic changes (Clarke & Spoormans, 2021, p. 2). Besides this, these neighbourhoods are not known to be appreciated for their aesthetics.

Unvalued aesthetics

In 2007, FARO architects put up the so called *Smaaktest* on the internet. From the results we can learn that post-war high-rise and housing from the seventies and eighties are the least aesthetically favoured of all the categories. Jurgen van der Ploeg (FARO) stated in NRC about his survey (Hulsman, 2007):

'Over de naoorlogse hoogbouw en over de woningbouw uit de jaren zeventig en tachtig is iedereen het eens: die zijn erg lelijk'

'Everyone agrees about the post-war high-rise buildings and about the housing from the seventies and eighties: they are very ugly')

Moreover, in today's public debate one only has to look at some of the popular book titles to get an idea of the dominant perception. Compare for example book titles like 'De lelijke jaren zeventig' (Biggelaar, 2018) and 'De magie van de jaren 30' (Kingma, 2016). Of course, the content of these books describes more nuanced stories but it gives an idea of the generally associated terms. Also worth noting is that the style of 70's architecture has not been undisputed in history either, already then critical terms given to the architecture that were not meant positively: 'Nieuwe Trutigheid' or 'schuin en bruin' (Vletter, 2004, p. 29).

When looking at the current renovation practice like innovation programmes such as the 'Stroomversnelling', the most common practice for upgrading the existing housing stock is exterior insulation (Stroomversnelling, 2018, p. 2). This means that, in the case of interventions for improving the energy performance, changes to the original aesthetic identity are not only very likely but already current practice.

Renovation, blessing in disguise?

Is the opportunity to change the aesthetic of this housing in future renovations a blessing in disguise or do we instead risk erasure of an entire period of this particular architectural appearance just because the dominant opinion about it is that it is ugly? If significant characteristics of this architecture are not recognized and valued they will be disregarded in renovations. But not only from the perspective of possible compromised heritage values in this renovation wave, it is also important to recognise the other values of this potential heritage. First of all, it is very much possible that replacing this housing would not be justifiable when taking into account the embodied energy of their structures. Secondly, as history has taught us, certain architectural styles have not always been valued at all times. For example, Jugendstil

was not appreciated in the 1950's and 1960's in the Netherlands but was celebrated later on. The appreciation of certain aesthetics is subject to taste and fashion.

Need for exploring aesthetic fundamentals of 1970's Dutch mass housing

Considering the body of knowledge about post-65 housing is still being created, the lack of public appreciation of 70's Dutch mass housing and the current renovation practice that covers up the 70's aesthetics, 70's aesthetics are at risk of staying unacknowledged. It will not be a sustainable renovation strategy if yet to be determined or discovered aesthetical values of Post 65 housing are lost. By means of defining the aesthetic fundamentals of 70's Dutch housing and demands of energy driven renovation this research will define criteria that will guide in the design process of energy performance driven housing renovation that acknowledge the 70's aesthetic fundamentals. The research results will be tested on the case of Goedewerf, located in Almere Haven. Goedewerf has a broad validity and is therefore suitable as a case study. Goedewerf represents the 70s architecture that strived for small scale and complexity, which includes elements attributed by Abrahamse typical of the 70s (2019, p. 18): 'low-rise buildings with staggered building lines, facades, building heights, and rooflines and irregularly placed windows, balconies and overbuilt outdoor spaces and parking lots, sometimes with galleries or inner streets connected to the public space by stairs'. Between 1965-1985 different forms of architecture were produced but on the other hand a lot of housing showed great uniformity:

'In Almere Haven is geprobeerd herkenbaarheid en geborgenheid te creëren binnen de nog door de modernisten beheerste ontwerpwereld. Dat leidde tot een nieuw stadsbeeld, dat van de bloemkoolwijk of woonerfwijk, dat al kort daarop werd geserveerd als 'Nieuwe Truttigheid': de wijken van de jaren zeventig trachtten de uniformiteit uit de wederopbouwperiode te vermijden, maar leken op hun beurt toch weer allemaal op elkaar.' (Abrahamse & Rutte, 2020)

'In Almere Haven an attempt was made to familiarity and feeling of security within a design world which was still dominated by modernists. This led to a new urban image, that of the cauliflower district or housing estate, which was soon after dismissed as the 'Nieuwe Truttigheid': the districts of the 1970s tried to avoid the uniformity of the reconstruction period, but in their turn all looked alike.'

Problem statement & Research questions

This research will address the danger of unsustainable renovation of younger mass housing (1965-1985) because potential heritage value could be compromised. Currently, the aesthetic fundamentals of this housing are often unacknowledged. This is caused on the one hand because the body of knowledge about Post 65 is still being created and on the other hand by the lack of public appreciation of 70's housing. In addition to this, existing 70's aesthetic are often disregarded in the current renovation practice due to the urgency of energy-driven renovation which often consists of exterior insulation.

Since housing that was built in 1965-1985 makes up a significant part, 31% in fact, of Dutch housing stock this problem calls for expertise on how to deal with the 70's aesthetics in a respectful way. In other words, identification of 70's aesthetic fundamentals and how to use them in urgent future-proof energy performance driven renovations is needed. The question at the heart of this study is therefore: What criteria should guide energy performance driven housing renovation of younger mass housing complexes, tested on the case of Goedewerf, that acknowledges the 70's aesthetic fundamentals? To answer this main research question, the research will be divided into two sub-studies. Firstly, what are the current demands for energy performance driven renovation? And secondly, what are the 70's aesthetic fundamentals? In this research aesthetic fundamentals are defined as architectural aspects that provide quality, which includes all physical elements or principles that provide a positive spatial identity or effect.

Methodology

The first part of the collective studio work was dedicated to developing renovation models. In preparation for this an analysis of Goedewerf in the domains of architecture, building technology and culture was made collectively by the New Heritage group. In addition to this, the results of the 'Speurtocht' survey for the research project 'Renoveren met Respect' were examined. The 'Speurtocht' results consist of what different stakeholders mention what they think is valuable about the neighbourhood, public space and complex. Based on the knowledge gained, a preliminary value assessment of Goedewerf was made using our own adapted version of Kamari's 'Holistic sustainability decision-making support framework for building renovation' (2017, p.344). Through a brainstorm session two or three Kamari criteria were combined and renovation models were created with the aim of achieving a higher score in these areas. The renovation model that comes closest to this research's is the model called 'Beautification' where the criteria 'Aesthetic' and 'Energy efficiency' were combined to focus on strengthening aesthetic value while improving the energy efficiency. This renovation model only does not take into account possible heritage values; this study will do so. A third Kamari criteria will therefore be included in this research called 'Integrity' because this includes the sub-criteria 'Site protection - Cultural heritage privacy'.

Current demands for energy performance driven renovation

Investigation of the current demands for energy performance driven renovation will be done through comparative analysis of targeted energy labels in current renovation practice, existing guidelines and future goals (Rijksoverheid, n.d.), energy performance indicators BENG (Rijksdienst voor Ondernemend Nederland, n.d.), NOM (Rijksdienst voor Ondernemend Nederland, n.d.) and Passive House (Rijksdienst voor Ondernemend Nederland, 2012).

For the context of current renovation practice and viability of aforementioned demands in younger mass housing renovation case studies of the programme 'De Stroomversnelling' will be studied (Stroomversnelling, 2021). Secondly, models by Konstantinou (2021) on update and upgrade the building envelope will be collected. Finally, 'Architectuur als klimaatmachine' (Yanovshtchinsky, Huijbers, & van den Dobbelsteen, 2012) will be consulted to identify the more general requirements for energy performance driven renovation are (e.g. insulation, detailing, ventilation).

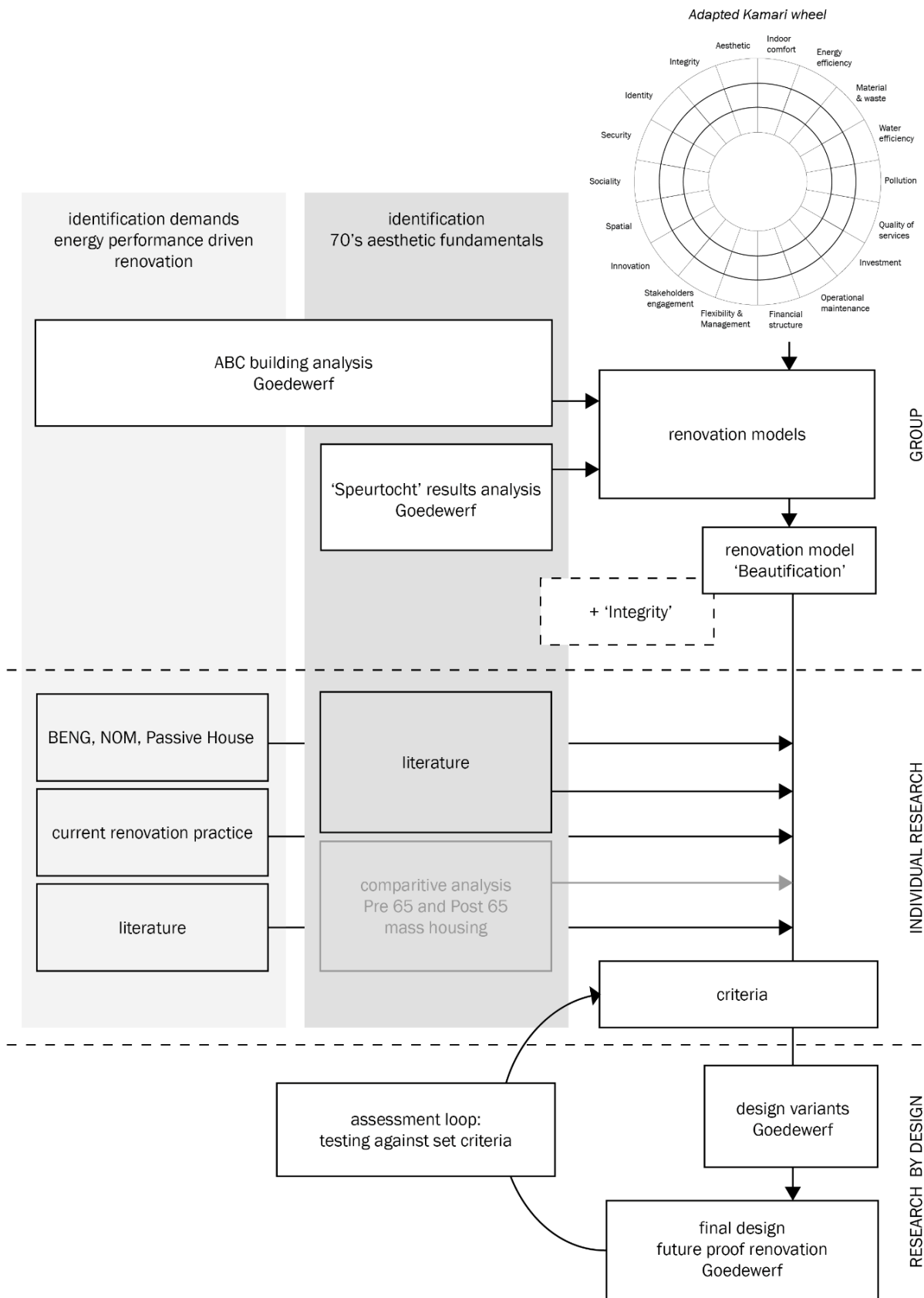
70's architectural aesthetic fundamentals

The identification of 70's architectural aesthetic fundamentals will be done through listing the architectural aesthetic fundamentals mentioned in the relevant existing literature (Bosma et al, 2007; De Vletter, 2004; De Vreeze, 1993; Idsinga, 2009; Berg & Kerkhof, 2004; Ibelings, 2004; Abrahamse, 2019; Abrahamse & Rutte, 2020; Van den Biggelaar, 2018; Blom et al., 2019; Somer, 2020). The following three questions will be used to draw up the inventory: How often is the aesthetic fundamental mentioned, why is it mentioned and is it clear in what projects they are used? Depending on the sufficiency of this inventory, the study will be supplemented by a comparative analysis of selected representative Pre 65 and Post 65 mass housing. The relevance and validity of these research results is enhanced by identifying the fundamentals from different perspectives.

Research output

The findings of the two sub-studies will culminate in general criteria that should guide energy performance driven housing renovation of younger mass housing complexes that acknowledge the 70's aesthetic fundamentals. The general criteria will be tested, in the form of research by design, on the case of Goedewerf in different design variants. The best variant will be further developed in a final design. For evaluation, the final design will again be assessed on the criteria set.

Research and Design Diagram



Frame of reference

Theories on aesthetics

This research touches upon the field of architectural aesthetics, or in other words: beauty in architecture. Van der Ploeg (FARO) stated that the aesthetic problem of Dutch 70's architecture is that it lacks detail and therefore is not valued as much as *Amsterdamse School* or 1930's architecture for example, where there was (supposedly) much more attention paid to detail. Van der Ploeg concluded on the basis of the 'Smaaktest' results that detailing is very important for the appreciation. The results showed that a house with an elegant eave and door frame is considered more beautiful than one with standard details, regardless of what architectural style it was. However, it is important to emphasize this is only a hypothesis. Of course 70's architecture has detail but Van der Ploeg suspects they are valued less. Among architects attention to detailing has always been a popular topic. Van der Ploeg's line of thinking fits in the line of thinking which is represented by popular phrases like 'God is in the details', attributed to Mies van der Rohe, but also recently also quoted again by Bekkering (2019). And it was Rem Koolhaas who complained: 'No money, no details.' However, there are also other theories on aesthetics where 'detail' or 'detailing' is not explicitly mentioned. The popular book by De Botton, called *Architecture of Happiness*, presents a list of certain 'aesthetic virtues' (2006, p. 249). De Botton argues that in architectural designs attention should be paid to 'Order', 'Balance', 'Elegance', 'Coherence' and 'Self-knowledge'. In addition, there is Kingma who proposes a different theory of why a certain aesthetic is valued (2012, p. 95). He argues the 1930s style is widely loved because it is the perfect balance between rationalism (function, impression, modern, reason) and romanticism (beauty, expression, traditional, feeling), and between the urban (cultural, creative, fast, innovative) and the rural (nature, organic, slow, conserving). According to Kingma, this is crucial for appreciation because balance is an integral part of the Dutch bourgeois residential culture based on certainty and civilisation.

By collecting different theories and comparing different theses, a wide range of aesthetic principles in architecture emerges. The aesthetic foundations of the 70s architecture can then be placed in a broader context of aesthetics. The frame of reference in this case will be used to provide a reasoned argumentation of potential value in 70's aesthetic fundamentals.

Relevance

The academic relevance of this research is characterised by the critical historiographical perspective on existing literature that discusses Dutch Post 65 architecture. The research output is a contribution to this still developing body of knowledge on Dutch Post 65 architecture. Only brief summaries of architectural aesthetics can be found in the existing literature (e.g. exploratory research reports by the RCE). These publications do not delve into the origin and refrain from explaining on what basis the lists of aesthetic elements was compiled. Furthermore, the literature that presents overviews of Dutch architecture through the past centuries (e.g. Bosma et al, 2007), only give brief general descriptions of 70s architecture. And in the available monographs of prominent Dutch Post 65 architects only background on individual developments of architectural aesthetics is outlined. This research aims to solve this problem by combining the existing knowledge together with new additional analyses, and creating a more complete picture and knowledge of the 70's aesthetic fundamentals.

With regard to other academic relevance, the research will make an attempt to deal with the field of aesthetics on an academic level. Trying to create clarity in the elusive dynamics of aesthetics and beauty in architecture. This research aims to place 70's aesthetic fundamentals within the framework of the specified aesthetic theses and theories.

Lastly, this research addresses the societal relevance of the increasingly urgent sustainable renovations of a significant part of Dutch housing stock (31%). The combination of aesthetics and building envelope renovation is particularly relevant in the light of the necessary improvement of energy performance (e.g. insulation, detailing). Through formulating guidelines and research by design for using 70's aesthetic fundamentals in renovation of younger mass housing this research creates know-how and guidance for future-proof renovations for a lower probability of compromised heritage values.

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