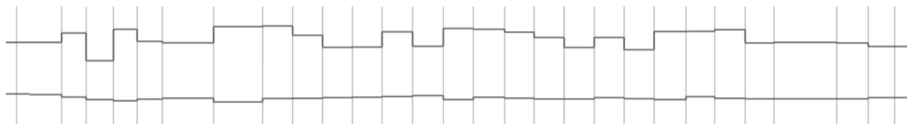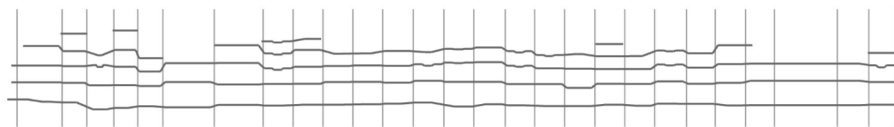**RESEARCH PAPER:**

Learning from *local vernacular aesthetics for office building redevelopment*

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This research paper is part of the graduation project:
It Is Time For *New Vernacular* Buildings

Project: Master Graduation
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Prologue

Technological advances over the past centuries have greatly improved our quality of life. However, when we look at historical centres with their vernacular buildings, we seem to prefer them to the modern ones.

According to Amos Rapoport there are three types of societies; primitive, vernacular and the modern. Each of these societies operates in such a fundamentally different way that we cannot understand their architectural differences just by comparing their looks. We need to delve into the characteristics of these societies to understand the different appearances (Rapoport, 1969).

Materials could suddenly come from everywhere and building components were standardised because of mass-production (Salingaros, 2014). The buildings became more anonymous and less an expression of the place (Golden, 2012). The relationship to nature changed, modern society went from a symbiosis to a dominating role in which it exhausts nature and creates waste and toxins.

Gradually, society is discovering the negative sides of this industrial efficiency. With the upswing of sustainability awareness we recognise that our 'throwaway society' is no longer acceptable (Chapman, 2015).

We demolish recent buildings that seem to be fine and there is a growing number of vacant office buildings (Gemeente Amsterdam, 2013). At the same time there is a shortage of housing, but demand and supply do not seem to match because there is a lack of flexibility and attractiveness. To prevent future vacancy we need to focus on transforming the office areas into mixed-use urban areas instead of mono-residential areas.

In redevelopment, there are many considerations what to maintain and what to demolish. How few interventions can we do to achieve this intended quality? How can we reintroduce attractive vernacular qualities in existing office buildings to transform them into attractive, vibrant, multifunctional and resilient urban areas?

LEARNING FROM LOCAL VERNACULAR AESTHETICS FOR OFFICE BUILDING REDEVELOP

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ABSTRACT

In the Netherlands many empty offices need to be redeveloped for a more urban setting. To attract people, serious change is needed instead of just mixing functions. Offices lack certain qualities that are present in historic vernacular architecture, like in the Amsterdam canal area. The research question is: "How can we learn from the aesthetic qualities of historic vernacular façades for office building redevelop?" To find the answer I compared the façades regarding the affordances, patterns and scale. We can learn from the aesthetic qualities of the historic facades by analysing the differences and critically reflect on their applicability for existing office buildings. The answer of the research question is a textual table with the façade differences and examples of possible implementations into the (re)design process.

KEYWORDS: *office redevelopment, aesthetics, pre industrial vernacular architecture, scale, patterns*

I. INTRODUCTION

Beauty is important in our lives because it brings us joy and purpose. But what *is* beauty and what does it mean in the context of architecture? And what *can* it mean in the context of the redevelopment of office areas?

The growing number of vacant office buildings is a major problem in the Netherlands. Urbanising mono-functional office areas is currently a major focus point for many municipalities. Sloterdijk is such an area which the municipality of Amsterdam is developing by mixing functions.[1] However, to make a former office building attractive, more is needed than just this mix of functions.

Many twentieth-century buildings have monotonous repetition. Post-war mass housing, the modern movement and globalisation radically transformed the urban space[2]. Due to industrialisation and globalisation, materials could from everywhere and building components became mass-produced[3]. Architecture therefore became less of an expression of the place[4]. These missing qualities seem to be present in vernacular buildings. If we want to make office buildings attractive can learn from the aesthetics qualities of beautiful local vernacular building.

The topic of beauty became something of an embarrassment in the modern art movement and with it, the accompanying vocabulary disappeared[5]. It is important to recreate an aesthetic framework to have a shared vocabulary so we can identify and compare aesthetic qualities and improve the environment[6].

There are generally spoken two approaches to aesthetics, the objective and the subjective. The objective is a rationalistic perspective that relies on an aesthetics expert and the subjective approach is a romantic perspective that relies on public preferences[7]. In this paper there is a tendency towards the objective approach. Although the saying "You can't argue about taste" is often mentioned, it seems that there is clearly a general preference. Beauty is not arbitrary and there *is* a certain logic behind

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[1] Gemeente Amsterdam, 2013, 20

[2] Nia & Atun, 2016, 195

[3] Salingaros, 2014

[4] Golden, 2012

[5] Kim, 2006, 25

[6] Nia & Atun, 2016

[7] Nia & Atun, 2016

what most people like[8], why otherwise would there be a list of the greatest buildings in the world (Parthenon, Notre Dame, Alhambra Tofuku-ji, etc.)[9].

But what *is* beauty? The Greeks believed that beauty was the clash between complexity and order and the moment a pattern is recognised out of a seemingly randomness. Smith calls this 'unified variety' and Baumgarten calls it 'apparent randomness which is underpinned by laws'[10]. These definitions seem to be more about art, however the Anglo-French word "beauty" was originally used for people, and specifically women and children. In this context in 1822 Stendhal defined beauty as *La beauté n'est que la promesse du bonheur* "Beauty is nothing other than the promise of happiness"[11]. Stendhal focuses here on the experience of the observer instead of the object of observation. This is somehow similar to Christopher Alexander's explanation of beauty in architecture. Alexander says that the beauty of a building is its capacity to support life. With this 'life' he means an *experience* of life as the ultimate feeling of happiness[12]. Both Alexander and Stendhal put the experience at the center and call the person or object that provokes this feeling "beautiful".

Unlike art, a building cannot only express liveliness, it can actually facilitate life. The purpose of architecture therefore has two different but interdependent aspects: The expression of liveliness and the affordance of life.

1.1. Research questions

In this paper I will compare the façade of the Customs and Tax office *De Knip* (Kingsfordweg 1) in Amsterdam with the façades of a part of the Amsterdam ring of canals (Keizersgracht 122-172a). In the context of office redevelopment the interventions that we can employ are limited. In building redevelopment we speak of a 'zero-point' of the building. This is the point up to which the building can be "peeled-off" such that it can be reused instead of being demolished. In practice, this often comes down to stripping the façade down to the structure. Changing the buildings expression often comes down to a 2D façade design because the building volume and the building line are fixed. The comparison will be illustrated with images but will mainly be text to prevent literal visual adaptation. This also created a certain abstraction which helps to stimulate the creativity[13] and does not impose rules[14].

The research question is:

- *How can we learn from the aesthetic qualities of historic vernacular façades for office building redevelopment?*

With the follow subquestions:

- *What are the main differences between the Amsterdam Ring of Canals and the building the Knip in Amsterdam Sloterdijk?*
- *How can we explain these differences?*
- *How do different projects translate their vernacular history into new architecture and what are their qualities?*
- *How can we implement the findings in office redevelopment?*

1.2. Methods

The research results are divided into four chapters: Background, Affordances, Patterns and Scale. The chapter Background is about the societal background of the different building processes. Without this background there is the risk of misinterpreting the compositional differences. The chapter Affordances is about the affordances of life and about functions. The chapter Patterns is about the patterns of the façade composition and their capacities to express liveliness. Finally, the chapter Scale is about the patterns of the façade on different scales.

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[8] Smith, 2003

[9] Alexander, 2002, book 2, 44

[10] Smith, 2003

[11] Harper, 2000

[12] Alexander, 2002, book 1, 34-36

[13] Dooren, 2013

[14] Breen, 2019, 76

The research strategy is qualitative research. However, qualitative research tends to integrate multiple methodological approaches[15]. Therefore, the research strategy consists of qualitative research, interpretive-historical research and logical argumentation[16]. The qualitative study is a compositional comparison between the canal houses and the office. Even though the canal area is a historical artefact, I consciously decide when to 'treat' it as historical. For example: With the compositional comparison I treat the buildings with Walter Benjamin's notion of 'being reborn in the present now'[17].

More information on the methodology can be found my Research Methods paper: *Research As Inspiration: Purpose as the guideline in research.*

II. RESULTS

2.1 Background

To properly interpret the physical differences in the façade, it is important to have a good impression of the different kinds of societies in which the buildings have been developed. Hereby the theory of Amos Rapoport from his book House Form and Culture is cited in order to explain the different of kind of societies and their different building processes.

According to Rapoport there are three types of societies: the primitive, the pre-industrial vernacular and the modern society. Primitive societies have only a few building types and a small amount of individual variation. The buildings are built by the residents themselves and there are no designers or architects. This type of society is further left out of consideration because the comparison in this paper is between a façade from a *pre-industrial vernacular* and a *modern* kind of society. It is often thought that they depend on chronology, but they rather depend on a way of life and a level of technology[18]. However it often happens that a society changes from pre-industrial vernacular into modern one. In the Dutch society we still see the results of these changes in our architectural heritage. In the Netherlands therefore, the pre-industrial vernacular buildings also have a historical significance. The most important differences between these two societies are set out in the table below.

Table 1. Modern vs vernacular[19]

	Canal area	**Office De Knip**
Society type	Pre-industrial	Industrialized modern
Building kind	Pre-industrial vernacular	High style modern
Construction	1613	1994
Designer	Future-user(s), In dialog with the tradesman	Architect Abbe Bonnema, In dialog with the developer
User	Owner and developer	Anonymous people, consumers
Knowledge	Shared by all Everyone knows the rules	With the schooled The specialist know the rules
Builder	Built by tradesman, unspecialized	Built by a team of specialists
Technology	Low-tech technology, man power	High level of high-tech technology, fossil fuel powered machines

[15] Groat & Wang, 2013, 243.

[16] Sattrup, 2012, 8.

[17] Komossa, 2018

[18] Rapoport, 1969, 14

[19] Rapoport, 1969, 4-8

Material	Local material	Global material
Building types	Less amount of building types	Many specialized building types
Visual language	Local visual language, different in every traditional society	Style that can come from everywhere: functionalism
Originality	Originality and innovation are condemned upon	Originality is important, concept justifies design choices
Variation	More individual variation in the model for each specimen	Each building is an original creation
Flexibility	Changing when needed	Not possible, closed design

A major difference between the two societies is the region-specific visual language of vernacular buildings. This is due to limited mobility and strong traditions and only differs a little bit from place to place[20]. This is very different from the style-based high style modern buildings where the visual language is not location-specific.

Another major difference is the presence of designers in modern societies where in vernacular societies buildings are undesigned[21]. The architect chooses the aesthetics based on a "style" that he/ she adheres to. This is in contrast to the strong traditions of aesthetics and a high degree of social control in vernacular societies.

Both societies are different to such a degree that we can not simply adopt certain aspects of the buildings process in the hope of creating a similar image. Reinterpreting local vernacular seems to be a trend[22]. The beautiful and harmonious variation in the canal house façades is nowadays a desired image for many housing projects in the Netherlands which three examples are shown in image 1.

Image 1. New canal houses in Amsterdam: Borneo Sporenburg[23], Klaprozenweg[24], Blok 59[25]

With these projects future-residents are in direct contact with the builder (with the help of an architect) like in the vernacular buildings process. However, the end result does not have as much quality as the original canal houses because there is no coherence in the visual language. Where in the modern society the originality and innovativeness are very important, it is not something that is sought after in pre-industrial vernacular, it is even condemned upon[26]. The variation in old canal houses is therefore of a different *nature* than the variation in the new canal houses, which was not critically reflect upon in these projects[27].

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[20] Stenvert, et al., 2010

[21] Fewins, 2018

[22] Fewins, 2018

[23] Ludwig, 2010

[24] Funda.nl, 2019

[25] EH-Architects, "Woning Blok 59 IJburg Amsterdam"

[26] Rapoport, 1969, 15

[27] Kleijn, Zoest, & Kurpershoek, 2013, 41

2.2 Affordances

If we want to create liveliness we need to create places where 'life' can happen. If we look at the amount of entrances in the façade of the canal houses and the office we can see great differences. At the canal houses there are many more doors that can literally facilitate more liveliness. In addition, this also gives the façade a more lively appearance.

Image 2. Doors - office & canal houses[28]

These amounts of doors are the consequence of the smaller building plots of the canal houses. The office is one building, with one function and one manager. Maybe we can say that the typology of a large-scale office in itself is not leading to liveliness. Breaking up the plinth and dividing it in smaller units with their own front door could be a intervention to increase the liveliness.

Housing
Office
Horeca/shop/art/hotel

Image 3: Functions - office & canal houses[29]

Certain functions are more lively than others or more lively at different times of the day. As we see in image 3 the office just has one function where the canal area has many different functions. As it seems ridiculous to some to compare two different typologies we need to remind ourselves that originally the canal area was solemnly a residential area. Only over time it became functionally mixed[30]. This mixed use could be introduced in office plinths to make the area more lively and walkable. The walkability makes the street more lively and increases the chance of people having a spontaneous chat. In addition, this larger mix attracts people who are looking for an alternative to the one-size-fits-all approach, allowing the liveliness of the area to again accumulate over time[31].

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[28] Illustration by author, Delft. December 8, 2019.
[29] Illustration by author, Delft. December 8, 2019.
[30] Kleijn, Zoest, & Kurpershoek, 2013, 40-45
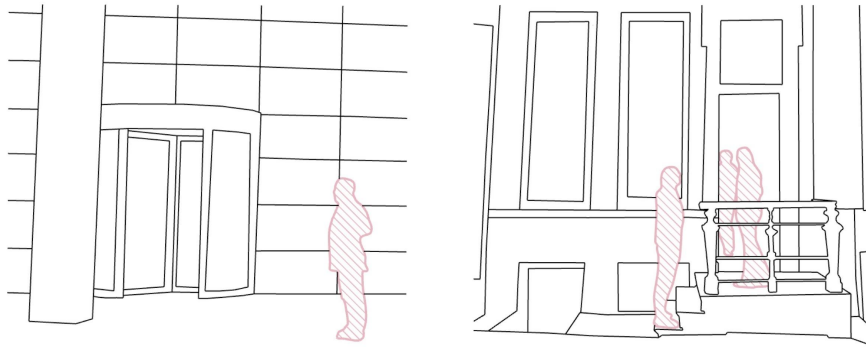[31] Beske & Dixon, 2018, 252

Image 4: Entrance affordances - office & canal houses[32]

Not only the quantity of entrances but also the qualities are important as visible in image 4. A typical canal house has a small staircase on the façade that leads to the front door. This staircase creates an intermediate zone between private and public. It is not only a functional entrance, it is also an attractive recreational area. It is a place to rest, to talk to the neighbours, to sit in the sun or to drink a cup of tea. According to Christopher Alexander, it is precisely these everyday actions that give a feeling of being alive and being happy[33].

Another feature of the canal house layout is the great privacy for the inhabitants. Due to the height difference of the belle etage and the intermediate zone, the view angle is such that it is difficult to look far inside the yet large window, resulting in very view darkened windows. This good hierarchy from fully personal to fully public is one of the keys to making a good urban area[34].

The office entrance on the other hand, has much less *affordances*. There is a lot of space but no possibility for recreational usage. The façade is a curtain wall, the glass is obscured by a reflective layer to generate more privacy inside. Also the revolving door does not allow interaction between people. It is this failure of creating liveliness that is one of Alexander's greatest criticisms of modern architecture[35].

Image 5: Entrance Piet Mondriaansingel, Diemen[36]

There are designers in the Netherlands today who try to create this vernacular liveliness. In image 5 is an entrance visible of a recently developed housing complex on the Piet Mondriaansingel in Diemen. The balcony on the right-hand side initially looks like a staircase entrance of a canal house, but when we come closer we see that it is in fact a balcony. The real entrance on the left is a shared entrance of a flat. The 'image' of a canal house has been copied, but the functional background of the elements has not been critically reflected upon. The layout of the canal houses were very functional. There were stairs because life took place on the belle etage and there was a cellar for storage with its own entrance[37]. In contrast to the canal house's smooth transition from public to private, in this design it

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[32] Illustration by author, Delft. December 8, 2019.

[33] Alexander, 2002, 55

[34] Beske & Dixon, 2018, 258

[35] Alexander, 2002, 57

[36] Illustration by author, Diemen. November 10, 2019.

[37] Kleijn, Zoest, & Kurpershoek, 2013

becomes a hard and sudden private entity in the public street. In combination with the large windows on the balcony that start at the floor, there is a lack of privacy that residents try to restore by closing off the windows with curtains.

2.3 Patterns

One of the frameworks to talk about aesthetics is patterns. The composition of a façade can exist of many different patterns. A pattern is nurturing if there is a good balance between chaos and predictability. Disordered information such as with deconstruction buildings are overwhelming. The opposite of too much predictability is redundant. The two extremes both cause causes psychological discomfort[38].

A pattern helps our brains to archive large amounts of information. The more we can store this information "properly", the better we can deal with novelty and surprise[39]. The types of patterns that people are exceptionally well equipped to properly arrange, are patterns from nature because we are familiar with them[40].

Image 6. Reflectional symmetry - office & canal houses[41]

One of the most common patterns in nature is symmetry. The most well-known type of symmetry is *reflectional symmetry*. In figure 6 we see that the office building uses reflectional symmetry on the façade as a whole. However, this way of using symmetry is very *redundant*. Christopher Alexander suggest an alternative which he calls *local symmetry*. Key to local symmetry is the fact that the symmetry is not along the entire axis of the building, but only in a certain part. The canal houses have this local symmetry in the upper part of the façade, which causes a beautiful order without being too predictable[42].
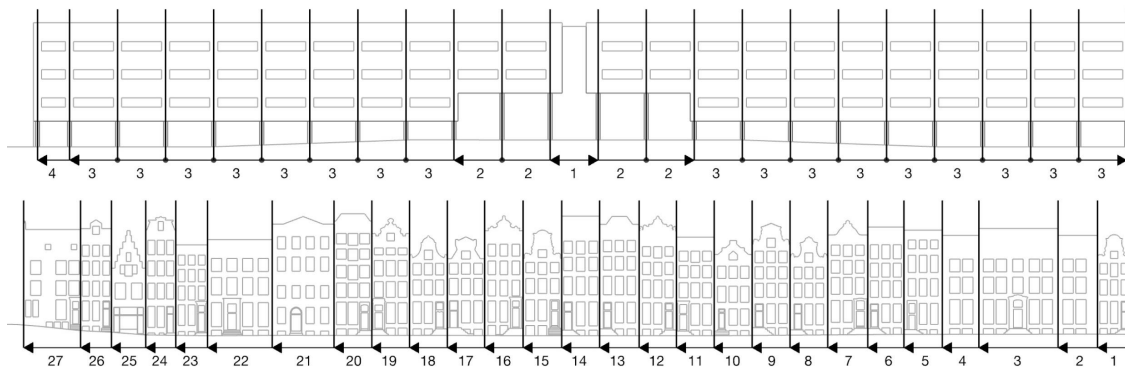
Image 7. Translational symmetry - office & canal houses[43]

[38] Salingaros, 2016
[39] Salingaros, 2016
[40] Smith, 2003, 27
[41] Illustration by author, Delft. January 4, 2020.
[42] Alexander, 2002, 193
[43] Illustration by author, Delft. January 4, 2020.

Another type of symmetry is *translational symmetry* which is the repetition of elements along a line. In image 7 we see translational symmetry of the office and the canal houses. With the office there are 17 perfectly translated units which make the façade *redundant*. The canal houses on the other hand have an *imperfect translational symmetry*. There are 27 unique but similar units which are repeated along a line. This results in an 'imperfect' yet very pleasant pattern[44].

Although people are attracted to symmetry, we find perfect symmetry too repetitive, too predictable and not beautiful. Even in nature too much perfect symmetry is not "useful". In nature there is a constant struggle between uniformity and non-uniformity[45]. Imperfect symmetry with spontaneous symmetry interruptions seems to be an important underlying principle[46].
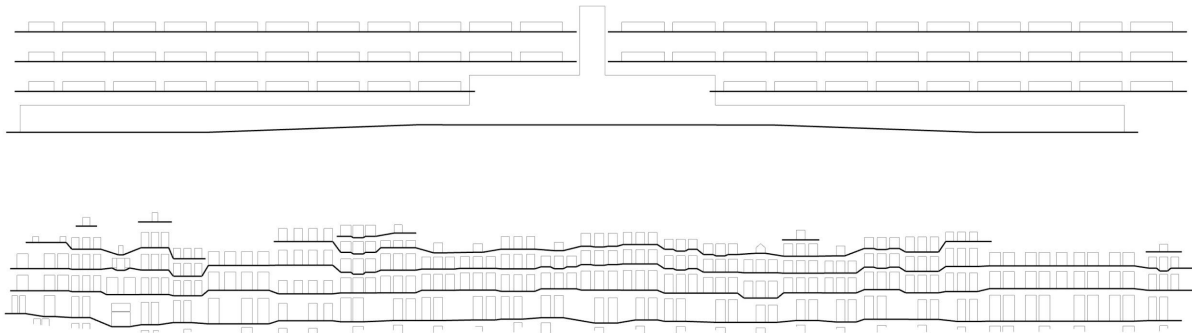

Image 8. Window lines - office & canal houses[47]

Another example of translational symmetry in the façade pattern can be seen in the window-lines in image 8. Again we see at the office façade that the pattern is too predictable seems empty; the symmetry is too perfect. On the other hand, there is the natural and pleasant pattern of the canal houses; there is a good balance of uniformity and non-uniformity within the symmetry pattern.

Patterns in nature are the result of growth and therefore radiate liveliness. An important characteristic of the natural world is the ongoing development instead of a masterplan design. Growth and development are determined by the previous developments[48]. This growth has a centre 'from which it grows'. Everything that has grown from this centre is related to this centre. Alexander says that liveliness in architecture occurs when we create a good centre[49]. This is regarding both the aesthetics and the functions (like in nature these are not separate entities). We can see this lively pattern of growth in the 1663 map of Amsterdam shown in image 9.
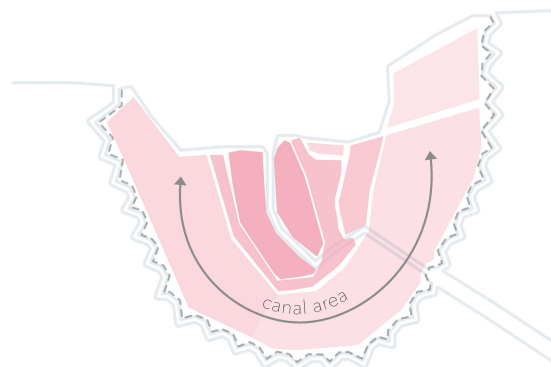

Image 9. Canal area center - Amsterdam 1663[50]

44 Salingaros, 2016

45 Smith, 2003, 27

46 Smith, 2003, 27

47 Illustration by author, Delft. January 4, 2020.

48 Smith, 2003, 28

49 Alexander, 2002, 239

50 Illustration by author, Delft. January 4, 2020.

A way to create a strong centre is by surrounding it with smaller centres[51]. We can give it extra strength by organising these secondary centres in a ring-like border. As we can see in image 9, the canal area is ring-like border for the old city center. This relation of the canal area to the old center determines the structure and the layout of the canal houses. Therefore we can not carelessly copy-paste this façade composition onto the office façade. The office building is part of a different urban structure with a different centre to which it needs to relate. This way of looking at buildings as part of a larger (urban) structure instead of isolated objects is key for creating liveliness[52].

Another result of naturally grown structures is their pleasant visual variations. Salingaros suggests we should use a step-wise adaptive design process to achieve this variation. This is in contrast to the widely used "all at once" design method of high style modern buildings.

Image 10. Zwenkgrasstraat, Rijswijk[53][54]

If we want pleasant natural variation in the façade but use a 'all at once' design process, we have the risk of creating *variation for the sake of variation.* In figure 10 we see a newly developed housing complex in Parelgraslaan, Rijswijkbuiten. The completed façade on the left suggests a collection of separate houses, each with their own variation as if the houses were constructed separately. However, we can see (at the right) that the houses are in fact one building constructed at once. There is variation in the window size, the brick colours and the façades, but the façade does not express liveliness. It does not seem to be part of a bigger whole or relate to a center. There is an *image* created and not a structure for liveliness.

Because office buildings are often large entity in fixed urban areas, we can best start with creating a center within the building itself. Often the existing structure already has simple rules of symmetry which can be a good starting point. (The aesthetic rules do not have to be complex. Mathematician Helge von Koch discovered in the nineteenth century that simple rules can bring about a high rate of complexity, which principle are visible in nature[55].) Subsequently we can create fruitful variation by determining the center and relating to it. We can further strengthen this center by making secondary centers using echos (similar form) and gradients (decreasing size)[56].
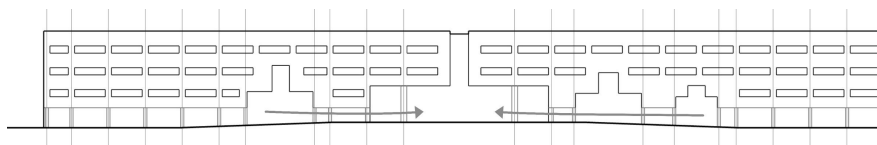

Image 11. Office - draft with extra centres[57]

An example of these interventions is visible in image 11. Functionally this could mean that there is a lively courtyard in the middle with cafes and restaurants. In the secondary centres there could be facilitating functions such as study places, shops, supermarkets and sports facilities. This way the

[51] Alexander, 2002, 239

[52] Alexander, 2002, 80-84, 110

[53] Illustration by author, Rijswijk. November 8, 2019.

[54] Google (n.d.)

[55] Smith, 2003, 28

[56] Alexander, 2002, 205-220

[57] Illustration by author, Delft. January 4, 2020.

secondary centres also functionally support the main center. By connecting the functional pattern with the aesthetic pattern the building becomes a more appealing coherence and it becomes easier to orientate oneself[58].

2.4 Scales

Architects often use the word scale regarding the effect buildings have on us. The size of a building does not dictate the scale. There are large buildings with a small scale and small buildings with a large scale[59]. Buildings communicate through the scale about the people who have paid for, designed or occupy the building[60]. Large buildings are often occupied by organisation or institutions. They want to show "we are a large, permanent and a prosperous organisation"[61].

Scale is not an abstract architectural concept but a meaningful and social idea that can even have political value. Certain elements can be made important with scale. In the Paris Opera of Garnier for example, the large-scale staircases were used to make people meet each other and to give people the feeling of being part of the Paris elite[62].
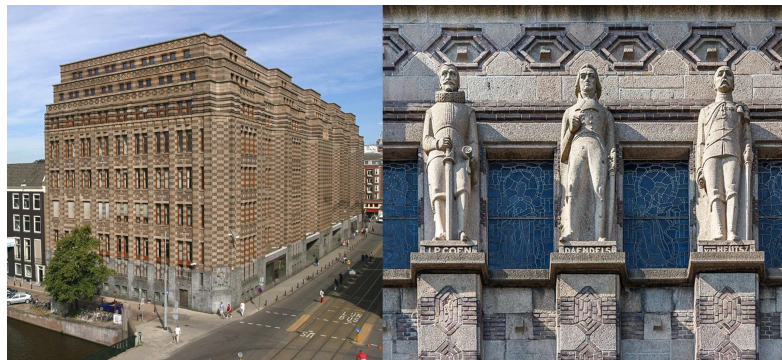

Image 12: De Basel, Amsterdam[63][64]

Apart from the scale, a building must have enough information richness on every scale[65]. A good example of a large scale building with information richness on every scale is the Basel in Amsterdam. Image 12 show the massive and large-scale appearance of the Basel but also the level of detail. This is in great contrast to the low level of detail in modernist buildings[66].
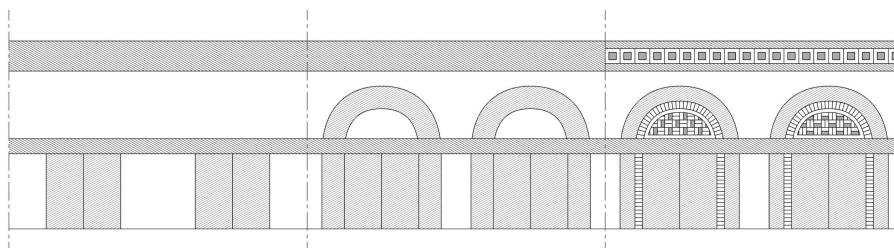

Image 13: Information richness façade[67]

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[58] Salingaros, 2016

[59] Lawson, 2001, 48

[60] Lawson, 2001, 44

[61] Lawson, 2001, 50

[62] Lawson, 2001, 48

[63] Kransberg, 'Vijzelstraat 32'

[64] Slaunger, 2016

[65] Salingaros, 2016

[66] Salingaros, 2016

[67] Illustration by author, Delft. January 6, 2020.

Information richness is nothing different than a nurturing pattern with a lot of detail. Patterns on a the smallest scale cannot be repeated endlessly. They should be 'interlocked' into the patterns of the larger scale as we can see in image 13. Information richness on the small scale is therefore determined by good patterns on the bigger scale. As a result new visual patterns appear when we move towards or away from a building[68].

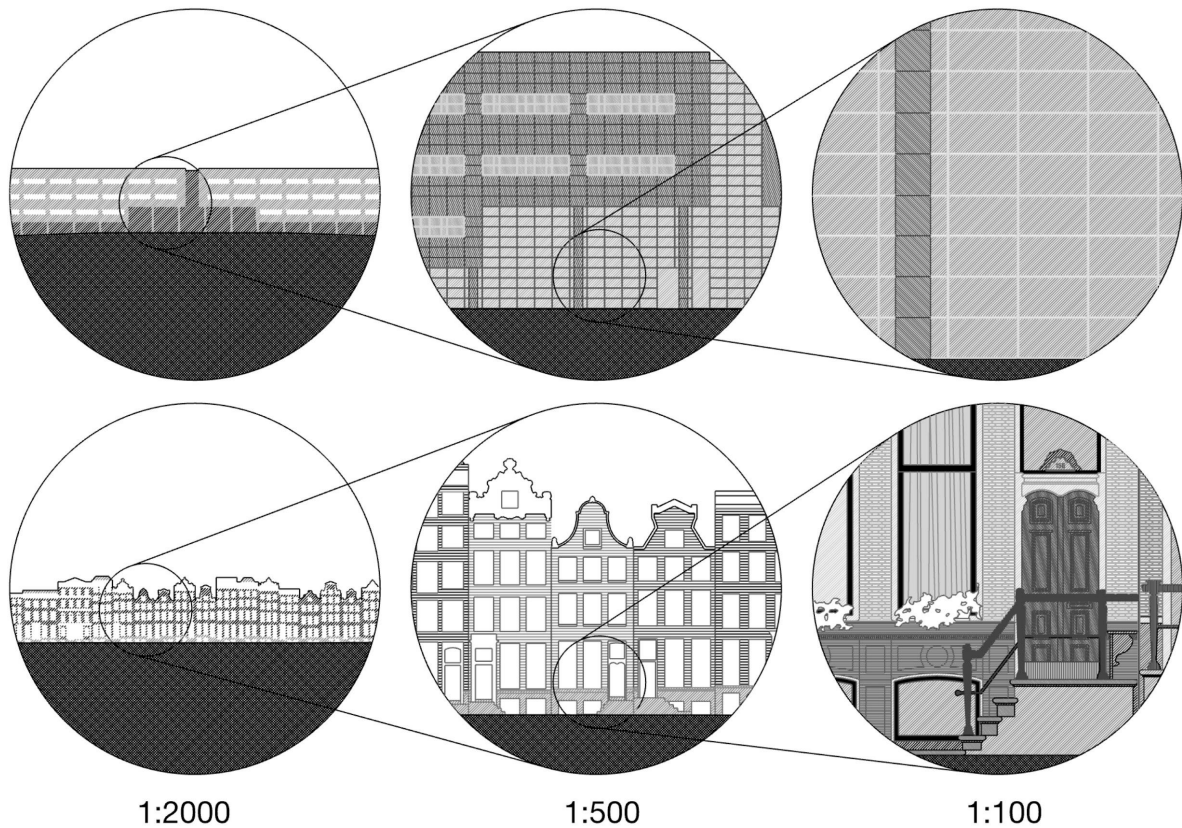1:2000   1:500   1:100

Image 14: Scale steps - office & canal houses[69]

In image 14 we see a step-by-step zoom-in analyses of the office building and the canal houses. We see that the images on all scales of the canal houses have information richness. The patterns on the larger scale are "filled" with smaller patterns on the smaller scale which results in a harmonious and coherent whole. With the office façade we see the same pattern on the different scales with no extra information. The pattern is redundant which makes it depressing and it becomes difficult to orientate oneself[70].

The need information richness dependents on the speed of the spectator. As pedestrians we come close to a building, we can touch it. We have sensations of temperature, wind, odor and sound. Modern means of transportation have changed this way of observing buildings. What works visually well for a pedestrian may not work for someone in a car[71]. With redevelopment it is therefore important to look critically at office façades in relation to the speed of the spectator: An office building next to a highway or a train track suffices with a lower level of detail[72].

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[68] Salingaros, 2016

[69] Illustration by author, Delft. January 4, 2020.

[70] Salingaros, 2016

[71] Lawson, 2001, 55-60

[72] Beske & Dixon, 2018, 251

CONCLUSIONS

How can we learn from the aesthetic qualities of historic vernacular façades for office building redevelop?

We can learn from the aesthetic quality of historic façades by looking at the qualitative differences and critically reflect on their applicability. The table below shows the insights of all investigations and conclusions. The difference between the canal houses and the office are summarised per theme. In the rightmost column is a suggestion for how to make the results operational in the design process.

The results are not conclusive. The purpose of this research is to provide perspectives and ideas for the design process. By comparing the two façades through words we have a more abstract conclusion: We can talk about the qualities instead of the visual language.

Table 2: Research conclusions

	Vernacular canal houses	Office De Knip	Research to (re)design
Background	The design is open-ended, changes occured over time	Closed final form, changes can not be made by users	Make the design open-ended instead of a closed final form
	High degree of conformity became varied over time	No variety, lack of information, emptiness	Focus on affordances and variety instead of originality
Affordances	Many different functions and affordances, walkable	Little functional variation or affordances	Make the area walkable by mixed use
	Many entrances, with good human scale and affordances for ordinary life	Little amount of entrances, with no human scale and no affordances	Create many entrances that both have a human scale and affordances for ordinary life
	Many small buildings with mixed functions (over time)	Large structure with little amount of doors in de façade and little functional variety	Compartmentalize the large structure into smaller units with mixed functions
	Smooth transition from public to private because of in-between-zone	Hard border between public and private	Create smooth transitions and hierarchies from public to private
Patterns	Strong compositional rules that allow large amount of variety and adaptability	Very basis facade concept with no variation	Create simple rules for the composition in which variation can take place (over time)
	Regular exceptions to rules	Almost no exceptions to the rules	Introduce regular but useful exception into the rules
	Multiple local symmetries	No local symmetry, only one reflectional symmetry along the middle axis	Create imperfect and local symmetries
	The canal area is a border around the old center	A clear center, but no visual hierarchy leading to the center	Choose a center and relate every part to the center (also functionally)
	Every house is a small center	No secondary centers	Create secondary centers that strengthen the primary center
	Variation as the result of different affordances	No variation	Create variation that is useful (orientation, functional, adaptability, affordances, etc.)

Scale	There are many patterns in pattern	The patterns on different scales are more like a grid	Design patterns in patterns
	The patterns are different on different scales (e.g. vertical/horizontal oriented)	The patterns on different scales are the same	Design different patterns on different scales
	High level of detail, good pedestrian area	Low level of detail, car-oriented designed	Choose smartly where what level of detail needs to be achieved
	The visual pattern give the function emphasis	The visual pattern does not give information on the function	Relate the visual pattern to the function, functional emphasis
	Great variety of balanced information richness on every scale	Very little information richness on smaller scales	Give the façade information richness on every scale

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