



**Lost in translation -  
investigating challenges  
of picturing landscape  
experience**

Rasmus Rinaldo  
Independent project / 30 credits  
Swedish University of Agricultural Sciences, SLU  
Department of Urban and Rural Development  
Landscape Architecture Programme - Uppsala  
Uppsala 2023

## Lost in translation - investigating challenges of picturing landscape experience

*Förlorat i översättning - undersökning av utmaningar i att skildra landskapsupplevelser i bild*

Rasmus Rinaldo

<b>Supervisor:</b>	Vera Vicenzotti, SLU, Department of Urban and Rural Development
<b>Examiner:</b>	Rolf Johansson, SLU, Department of Urban and Rural Development
<b>Co-examiner:</b>	Anna Lundvall, SLU, Department of Urban and Rural Development Åsa Ahrland, SLU, Department of Urban and Rural Development
<b>Credits:</b>	30 credits
<b>Level:</b>	Second cycle, A2E
<b>Course title:</b>	Independent Project in Landscape Architecture, A2E - Landscape Architecture Programme - Uppsala
<b>Course code:</b>	EX0860
<b>Programme/Education:</b>	Landscape Architecture Programme - Uppsala
<b>Course coordinating dept:</b>	Department of Urban and Rural Development
<b>Place of publication:</b>	Uppsala
<b>Year of publication:</b>	2023
<b>Copyright:</b>	All featured images are used with permission from the copyright owner.
<b>Original format:</b>	A4
<b>Online publication:</b>	<a href="https://stud.epsilon.slu.se">https://stud.epsilon.slu.se</a>
<b>Keywords:</b>	Landscape representation, visualization, digital pictures, aesthetic experience, arts-based method

## Publishing and archiving

Approved students' theses at SLU are published electronically. As a student, you have the copyright to your own work and need to approve the electronic publishing. If you check the box for **YES**, the full text (pdf file) and metadata will be visible and searchable online. If you check the box for **NO**, only the metadata and the abstract will be visible and searchable online. Nevertheless, when the document is uploaded it will still be archived as a digital file. If you are more than one author, the checked box will be applied to all authors. You will find a link to SLU's publishing agreement here:

- <https://libanswers.slu.se/en/faq/228318>.

YES, I hereby give permission to publish the present thesis in accordance with the SLU agreement regarding the transfer of the right to publish a work.

NO, I do not give permission to publish the present work. The work will still be archived and its metadata and abstract will be visible and searchable

## Abstract

The versatile qualities of the drawing medium, from analogue sketches to digital production, makes visual depiction a much used tool in architecture and design because of its ability to communicate ideas, proposals and visions. However, depicting landscape experiences in a picture is claimed to be difficult. Even though understanding human experiences of landscape has policy relevance in discourses on sustainability, there is no general strategy for how landscape architects visually represent such aspects of landscape.

The objective of the thesis is to draw attention to a challenge landscape architects face when representing a landscape in a picture. This is done by critically exploring the limitations of digital still picture media in relation to how humans perceive landscapes corporally. As a methodological exercise, an otherwise regular visualization process is reversed in order to "translate" an already lived landscape experience, as opposed to one imagined, into a picture. A theoretical framework drawing upon the philosophical field of aesthetics is constructed using ideas of everyday aesthetics, formalism and environmental aesthetics.

What the results are showing is that the two dimensional still picture is rather limited in its ability to express a landscape experience. While depicting appearances in a landscape can be created as views, the still picture hinders a sense of motion, action or response that one otherwise may find in a physical landscape.

## Sammanfattning

### Introduktion

Landskapsarkitekter använder bildverktyg och visuella kommunikationsmedel i många sammanhang, exempelvis för att undersöka, designa eller presentera material. Tack vare att digitala verktyg har fotorealistiska renderingar av landskapsvyer möjliggjorts. I praktiken skapar det en efterfrågan på avancerade representationer av landskap som, i ett sammanhang av landskapsarkitektur, ibland inte ens finns eller ännu har färdigställts. Inte för att detta nödvändigtvis behöver innebära ett problem kan det uppstå spänningar när en bild eller visualisering förstås som en skildring av hur en plats kommer att upplevas på plats - i det fysiska landskapet. Landskapsupplevelser är svåra att skildra i en bild eftersom de är personliga, subjektiva och kan ta lång tid att utvecklas. Med syftet att dra uppmärksamhet till denna problematik avser jag att kritiskt undersöka de begränsningar en digital stillbild medför när en landskapsarkitekt avser skildra upplevelser i en visualisering. Frågorna som besvaras i uppsatsen är:

*Hur kan visuella estetiska upplevelser som en har i ett fysiskt stadslandskap avbildas i tvådimensionella bilder*

*Vad är konsekvenserna av att översätta en landskapsupplevelse till en visuell representation?*

Jag närmar mig frågan från perspektivet av en landskapsarkitekt med ambition att skapa digitala renderingar enligt en standard och stil som jag själv förstår från en akademi och praktik i svensk kontext. Avgränsningen mot ett digitalt bildspråk görs för att kunna diskutera resultaten i relation till visualiseringskultur som till stor del är digital och teknikdriven.

### Teoretiskt ramverk

För att identifiera och beskriva visuella, estetiska upplevelser av ett landskap konstrueras ett teoretiskt ramverk som hämtar inspiration

från en del av filosofin: estetiken. Som en del av en filosofi som fokuserar på varseblivning konstrueras ett ramverk som hjälper mig att beskriva vilken aktivitet en upplevelse utgör (everyday aesthetics), vilket utseende eller form en upplevelse har (formalism), samt hur en miljö påverkar en människa (environmental aesthetics).

### Metod

I en vanlig visualiseringsprocess skapas en bild utifrån visioner, idéer och fantasi, och visionsbilder som förklarar eller skildrar upplevelser av ej byggda miljöer får därmed antas vara grundade på hur dessa platser förmodas uppfattas i en framtid - i ett sådant sammanhang har därmed de som visualiserar landskapet (landskapsarkitekter eller visualiserare) i fråga ett stort inflytande på hur platsen representeras i bild. För övningen i denna uppsats kommer en sådan process att omvändas och istället utgå från en plats som redan existerar och de upplevelser människor kan få av att vistas där. Dessa upplevelser "översätts" sedan i bilden genom en konstbaserad metod där jag med hjälp av olika material och verktyg, så som penna, papper, dator, programvara och artificiell intelligens skapar bilder på ett systematiskt sätt i en experimentell anda.

Metodologin är uppbyggd kring tre faser: *Uppleva, Avbilda, Reflektera*.

*Uppleva* bygger på fältstudier där jag tillsammans med två informanter besöker Kvarnholmen, en halvö i Stockholms skärgård. Under en förmiddag i februari 2023 vistades vi i området och promenerade runt halvön. Tillsammans synliggjorde vi visuella estetiska upplevelser för varandra genom samtalet, och som observatör förde jag anteckningar löpande under tiden. Transkriberingen gjordes under eftermiddagen samma dag som besöket. Upplevelser som vi hade i fält identifierades och beskrevs enligt det teoretiska ramverket. Genom vilken aktivitet möjliggjordes upplevelsen? Hur svarade vi på landskapet? Hur uppenbarade sig upplevelsen visuellt?

*Avbilda* innebär en konstbaserad metod där de upplevelser som identifierades och beskrevs i föregående fas översätts i bilder. Den utrustning som användes var penna, papper, dator, Adobe Photoshop, Adobe Illustrator och OpenAI Dall-E 2. På så vis används bildskapandet som metod för att utforska bildmediet och de svårigheter, begränsningar och möjligheter som finns i att översätta en upplevelse till en bild. Denna fas innebar att arbeta bildmedvetet och under hela processen fördes anteckningar i en journal där reflektioner och insikter noterades.

*Reflektera* är den fas där de bilder och representationer som skapades under föregående fas granskas kritiskt utifrån dess innehåll och förmåga att skildra de upplevelser som beskrivits från fältstudierna. Här lyfts frågor kring bildernas förmåga att skildra en viss upplevelse (dess utseende, aktivitet och respons) i relation till hur jag, rent tekniskt, angrep representationen av samma upplevelse. I denna fas synliggörs svårigheter, utmaningar och möjligheter i att översätta en landskapsupplevelse i bild inom ramarna för detta arbete.

## Resultat

Resultaten visar exempel på hur de landskapsupplevelser som vi hade i Kvarnholmen kan skildras i bilder. Det visar sig vara utmanande att visa tidsförlopp och de upplevelser som utvecklas över tid, till skillnad från de upplevelser som kan översättas i en utblick eller vy. Resultaten visar ett exempel där ett collage används i syfte att representera rörelse och sekvenser vilket jämfört med en sammanhängande stillbild ter sig mer rytmisk.

Att montera figurer, eller människor, i bilder skapar förutsättningar för att visa scener och skapa berättelser för en bild vilket dessutom möjliggör att visa genom vilken aktivitet ett landskap upplevs, som exempelvis att promenera, cykla, fika, rasta hunden etcetera.

Att i bild visa hur en person påverkas av en miljö i form av känslor, åsikter och intryck, är utmanande eftersom sådan information är personlig och därmed behöver översättas i flera led genom att kvantifiera. I sin tur riskerar detta att reducera den ursprungliga upplevelsen som existerar i en viss tid och på en viss plats.

Bildelement som har stort inflytande på hur en bild upplevs är himmel, ljus och skugga. Det är möjligt att med små medel och justeringar skapa uttrycksfulla bilder genom att modifiera dessa tre parametrar.

## Diskussion

En stor del av övningen innebär tolkning i flera led, vilket i sin tur skapar distans från stunden då upplevelsen på Kvarnholmen skedde. Tolkningsutrymmet tyder på att bilderna som skapas i detta arbete måste förstås som en persons försök till att översätta upplevelser i en bild, och bör därmed inte förstås som generaliserbara resultat. Däremot kan de insikter som berör skapandeprocessen diskuteras i vidare bemärkelse, och resultatet kan på så vis fungera som mindre bra exempel eller som inspiration.

Den typ av bilder som framställs i arbetet kan fungera i sammanhang där tekniskt noggrannhet inte är viktigt, exempelvis för en skylt intill ett naturreservat, en broschyr, en rapport från en landskapsanalys eller för att idégenerera under tidigt skede i en designfas. Bortom stillbildmediet kan det finnas möjligheter att skildra aktiviteter genom exempelvis rörlig bild där sekvenser och tidsaspekten är viktig.

Det teoretiska ramverket fungerade väl för att verbalisera upplevelser. Däremot görs det tydligt att fokuset på det visuella gör att vissa parametrar blir lite väl enkla att applicera, exempelvis då vi uteslutande upplevde landskapet genom aktiviteterna promenera, stå och titta. Att involvera flera sinnen kan rimligtvis ge rikare aktivitetsbeskrivningar.

Fältstudien som genomfördes tillsammans med två deltagare var ett bra upplägg för att samla in information. Deltagarnas bidrag i form av att synliggöra och dra uppmärksamhet till olika intryck i Kvarnholmen var ovärderligt för slutresultatet. Fokus på byggd och hårdgjord miljö kan förklaras av att platsbesöket genomfördes under en molnig vinterdag under en vardagsmorgon, samt för att Kvarnholmen är ett stadslandskap.

Att använda en konstbaserad metod gav insikter om processen att själv framställa digitala stillbilder vilket därmed möjliggjorde reflektion kring bildmediet. För att komplettera detta vore en möjlighet att intervjua landskapsarkitekter eller visualiserare som arbetar med digital rendering av landskap. Dessutom är min egna färdighetsnivå samt de verktyg som används uppenbara faktorer som påverkar resultatet. Att använda sig av andra medier, så som skulptering, modellering, måleri eller poesi kan vara andra uttrycksätt för att utforska landskapsrepresentation baserad på upplevelser.

# Innehåll

<b>1.0. Introduction</b>	<b>10</b>
1.1. Objective	11
1.2. Research question	11
1.3. Scope, delimitations and case	11
1.4. Point of departure: positioning the thesis in a sustainability discourse	12
1.5. The visual mediums and the role of pictures in landscape architecture	13
1.5.1. Visualization culture in landscape architecture practice	15
1.5.2. In conclusion	17
<b>2.0. Theoretical framework</b>	<b>18</b>
2.1. Understanding visual experiences according to aesthetic theory	18
2.1.1. Everyday aesthetics: what activity is the experience?	18
2.1.2. Formalism: what is the appearance of the landscape?	19
2.1.3. Engagement theory: what is the response to the environment?	19
2.2. An overview of the framework	20
2.3. Subject-object relationship: what is my position in these landscape experiences?	20
<b>3.0. Methods and materials</b>	<b>22</b>
3.1. Case: Kvarnholmen in the Stockholm archipelago	22
3.2. Phase 1: Experiencing	22
3.3. Phase 2: Picturing	23
3.4. Phase 3: Reflecting	24
<b>4.0. Results</b>	<b>26</b>
4.1. Experience: A sensation of being close yet far	29
4.1.1. Translation and creation	29
4.2. Experience: Experiencing forms as harmonic	33
4.2.1. Translation and creation	33
4.3. Experience: Surprising views and excitement	37
4.3.1. Translation and creation	37
<b>5.0. Discussion</b>	<b>40</b>
5.1. Visual representation involves interpretation	40
5.2. Depicting activity, motion and responses as suggestive pictures	41
5.3. The pictures in relation to professional practice	41
5.4. Theory help verbalise experience	42
5.5. Methodological reflections	42
5.6. Conclusive statement	43
<b>6.0. References</b>	<b>44</b>



## List of figures

All figures in this thesis are created by the author - some with the assistance of AI.

Figure 1. Illustration showing the theoretical framework in conclusion -----	20
Figure 2. Illustration showing the methodology in a sequence, illustrating the different phases in relation to each other -----	23
Figure 3. Illustration showing the route walked during the field study -----	25
Figure 4. Photomontage depicting an outlook -----	28
Figure 5. Photomontage depicting the same as figure 3, without people in foreground -----	29
Figure 6. Photomontage depicting three people outlooking the sea -----	30
Figure 7. AI generated image depicting three people next to water -----	31
Figure 8. AI generated image depicting three people next to water-----	31
Figure 9. Photomontage depicting three people outlooking the sea -----	31
Figure 10. Illustration showing built structure of Kvarnholmen in 3D-----	32
Figure 11. Photomontage showing buildings and circles -----	33
Figure 12. AI generated picture depicting cylinder forms -----	34
Figure 13. Three people in front of houses and silos -----	35
Figure 14. A zoom in of figure 16 -----	36
Figure 15. A panoramic photomontage showing red brick houses seen from from perspective-----	37
Figure 16. A panoramic photomontage depicting various views between red brick houses-----	37
Figure 17. A panoramic photomontage showing red brick houses framing landscape views in the background -----	38-39
Figure 18. A collage with snapshots of figure 17 -----	39

# 1.0. Introduction

---

Drawing has been used as a tool within landscape architecture for centuries and is central to architectural practice. The far-reaching bond between the drawing medium and architecture remains a topic of academic interest (Hill 2006). As an example of this relationship it has been proven fruitful to use the drawing medium when conducting research focusing on relationships between physical environments and communities (Kabir 2012). Historical uses of drawing as a design tool, in scale one to one, exemplifies another way this visual tool can be employed within the profession of landscape architecture (Dümpelmann 2022).

As far back as the 15th century in Italy, the invention of perspectival drawing techniques enabled the creation of 3D-effects on flat surface (Hill 2006). This in turn enabled “realistic looking views” to be drawn on paper. This is a drawing technique still used as a common visualization approach in today’s profession when presenting a design because it offers a picture where spatiality and depth is easy to understand and interpret (Kullman 2014). Presenting a landscape this way therefore makes visible how architectural ideas will look post-construction if seen from one particular point of view.

In addition, digital advancements enable the creation of perspectival landscape representations that look more like photographs taken in real landscapes. Such progression within visualization production not only result in detailed and sophisticated pictures, but also contributes to certain norms and cultures in which landscapes are visualized. One

concern of visualization culture today is a growing demand for these realistic perspectival pictures spurred by technological advancements also made in other fields (Kullman 2014), such as cinematic animation. Some benefits of photorealism in landscape representation is that it offers a familiar view, a picture through which one can imagine how it would be to experience a particular space. On a more negative note, however, accessing and managing advanced computer software requires specialists that mainly larger firms afford (Kullman 2014). That way, smaller businesses can’t compete with such ideals in visual production. Moreover, the acceptance of realism in visualization production can lead to “compositional clichés, mawkish atmospheric effects and trite details.” (Kingery-Page & Hahn 2012:69) similar to stereotypical elements in landscape photography (Kingery-Page & Hahn 2012:69).

The versatile qualities of the drawing medium, from analogue sketches to digital production, makes visual depiction a much used tool in architecture and design because of its ability to communicate ideas, proposals, visions and experiences. However, depicting landscape experiences in a picture is claimed to be difficult (Corner 1992; Meyer 2008; Kullman 2014). Different people will experience different things while being in the same place at the same time, suggesting there is a subjectivity that naturally is hard to render in a picture and that experiences are context-dependent and specific to the individuals experience of place. Furthermore, as the bodily experience of landscape involves more dimensions than the two offered by a

drawing or picture, it further complicates the endeavor to translate a bodily experience to a picture.

Another complex aspect of depicting landscape experience is that there is an apparent distance between a landscape representation (a picture/visualization) made in a studio environment to the physical and tactile landscape (Corner 1992; Kullman 2014). Representations of landscape projects, or images presenting design, are usually made prior to the realization of what is depicted, thus basing them on speculation and imagination. As they are manifestations of “visions”, there is no reality to compare them to. For example, when creating photorealistic visualizations, an “imagined landscape” is automatically created, without regards to how that certain view would actually be perceived post-construction. In other words, visualization culture does not necessarily account for the actual experience of being in a landscape - simply because most landscapes that are visualized do not yet exist and its corporeal counterpart can not therefore be used as a reference of reality.

It is not uncommon that a landscape design is presented through different types of visual media: drawings, sketches, diagrams, illustrations, elevations, plans, photographs, notations and perspectival views. And photorealistic renderings of the latter in particular is seen with admiration - perhaps because it reveals tech savviness. As a methodological exercise, I will in this thesis reverse an otherwise regular visualization process and depict in pictures an already lived landscape experience, as opposed to one imagined. By doing so, it can contribute to understanding the challenges of depicting landscape experience and what gets lost when translating a bodily experience to a picture. Two participants are involved in the exercise in order to gain a wider range of landscape experiences beyond my own. Afterwards, an arts-based method is employed where drawing and computer software, available to any landscape architect, will be used to create pictures

that seek to depict the experiences we as a group have in the physical landscape. This process is afterwards reflected upon from an autoethnographic standpoint where knowledge is gained in the form of insights from a creative process.

### 1.1. Objective

The objective of this thesis is to draw attention to a challenge landscape architects face when representing a landscape in a picture. This is done by critically exploring the limitations of digital still picture media in relation to how humans perceive landscapes corporally, and to understand how different tools of visualization capture experiences of place.

### 1.2. Research question

The following two questions will be answered in this thesis:

*How can visual aesthetic experiences one has in an urban, corporeal landscape be depicted in two dimensional pictures?*

*What are the implications in translating landscape experience into a visual representation?*

### 1.3. Scope, delimitations and case

The study turns to students in training or professionals in practice interested in visual communication. The scope of the study is on two dimensional still pictures, although representations of landscape appear in many other forms, such as physical models, texts and motion pictures for example.

All argumentation is made from the perspective of a landscape architect, which further entails that discussions around the results should be understood in relation to such a practice, with a reservation for a “student perspective” of the profession.

In terms of experiences, I seek to understand situations behind visual experiences, without attempting to evaluate or examine any aspects of design, or for that matter, criti-

cally evaluate someone else's experiences. This means that experiences are described, but not evaluated. I am aware that having experiences and perceiving the world involves the engagement of all senses and is not exclusive to visual sense. The European Landscape Convention defines landscape as an area perceived by humans (Council of Europe Landscape Convention 2000), without further delimiting the perception of landscape to any specific sense. However, in this study there is a focus on visual sense and visual spatial perception, as the topic revolves around things to be seen: pictures. Starting to investigate representations of sounds and scents, for example, is an ambition too big and a topic too complex to be addressed with regards to the scope of the study.

#### 1.4. Point of departure: positioning the thesis in a sustainability discourse

Beauty and aesthetics are raised as cornerstones in the discourse of environmental ethics in landscape architecture (Meyer 2008; 2015). Some recent writings on aesthetics in landscape architecture challenge ways of thinking about beauty (Herrington 2016) and present theoretical frameworks for architecture criticism (van Etteger et al. 2016). Rediscovering aesthetic landscape concepts, such as picturesque aesthetics, which is usually understood as dispatched to the past, is another way aesthetics in landscape architecture is being lifted in discussions on sustainability (Herrington 2006; Thompson 2006).

For landscape architecture, aesthetics are usually understood as a visual pleasure, sometimes neglected as superficial matters (Meyer 2008:6). Aside from discussions on taste, style and appearance lies another discourse on aesthetics: how designed landscapes perform on the minds of the public through landscape experiences, and what that means for the development of sustainable landscape design.

Referring to works of landscape architecture as cultural products, Meyer suggests that designed landscapes "...can play a role in building sustained public support for the environment." (Meyer 2008:10). If designed landscapes aesthetically perform in people's mind and create empathetic responses to the environment, it will lead to the development of environmental ethics, where appearance can be understood as:

[...] more than a visual, stylistic or ornamental issue, as more than a rear-garde interest in form. (Meyer 2008:7)

By pointing out bodily engagements in an environment as a way to experience landscape through sense perception, Meyer suggests that:

[...] immersive, aesthetic experience can lead to recognition, empathy, love, respect and care for the environment. (Meyer 2008:7)

If landscape design is seen through such a lens, its aesthetic qualities nevertheless become relevant for the development of sustainable cities, and a contributing factor to achieving SDG 11. In recent years, a number of political actions highlight aesthetic matters in the built environment. On a global level, the United Nations action-oriented document *The New Urban Agenda* gathers issues on sustainable urban development (United Nations Human Settlements Programme u.å.), in the EU, the commission has initiated a movement called *New European Bauhaus* which for example connects issues on design and aesthetics to the goals of climate neutrality (ArkDes Think Tank 2021). In Sweden, a proposition was passed in 2018 leading to a governing commitment to guide initiatives concerning architecture and the built environment towards a care for aesthetic values (Boverket 2022). Understanding aesthetics, thus, has policy relevance as well as helping take forward architectural practice.

Whilst sustainability is not the conceptual focus of this thesis, it does position the topic of this thesis within a sustainability discourse in landscape architecture that deals with how people engage in, appreciate and perceive outdoor environments. It draws attention to the human experience and encounters made in landscape.

### 1.5. The visual mediums and the role of pictures in landscape architecture

Here, a literature review is presented where an account of the relationship between visual media and landscape architecture is made, providing a background against which the results can be discussed.

Central to architectural practice is drawing: “the act of making a picture with a pencil or pen, or a picture made in this way” (Cambridge Dictionary u.å.). Scrutinized through a linguistic lens, the term drawing originates from the Italian word ‘disegno’, which refers to both an activity of drawing forward an idea, as well as putting a mark on a piece of paper with the use of a pen (Hill 2006). This activity can be used as a means to investigate, communicate and project ideas (Hill 2006). In a study in Northern Bangladesh, it has been proven beneficial to conduct drawing activities, by hand and on-site, when looking at relationships between community and place (Kabir 2012). If used as a research method, drawing on site can lead to knowledge development as it requires physical presence in a place, which in turn leads to engagement with people residing in the areas (Kabir 2012). As exemplified, drawing can be used as a tool to explore and investigate in the field, but are also employed in more rational and standardized ways in practice.

Based on my own encounters with practice, it is fair to say that drawing, made with pen, paper or computer, holds a central role in everyday practice for at least some landscape architects: technical drawings are commonly created using computer software, and sketch drawings by using pen, pencil and paper. However celebrated and appreciated

the drawing medium may be, there exists complexities in representing landscape in drawing form. When doing architectural drawing, such as projections, representations and notations, these processes precedes construction on site and is the medium from which landscape architecture is realized (Corner 1992), meaning that there is a distance between the landscape architect (and the drawing) and the landscape in both time and space (Corner 1992; Kullman 2014:21). Applying the same logic to the exercise in this thesis, it could be claimed that the issues investigated here are approached from a distance by employing a visual medium. A landscape is perceived in different ways from a picture and appeals to different parts of our perception, nevertheless, a landscape can (if accepting it as a visual phenomena) become more graspable through pictures if understanding pictures as a media containing information.

The fact that landscape architects usually work in the “intermediary and translatory medium that we call drawing” (Corner 1992:245), from which landscapes are constructed, suggests that creative access to the landscape is given through the practice of drawing (Corner 1992:245). Or in other words, in order to impact the formation of landscape one needs to access the constructional and instrumental drawings. The way I understand this is that architecture generally is constructed and realized in accordance to what the technical drawings are projecting, such as the placing of different objects, the choice of material and texture, the measurements and ratio of different features etcetera. Through detailed drawings made by architects, craftsmen can then realise a landscape design according to drawn instructions. In short, the people having access to the creative alterations of landscape, through drawing, are the landscape architects (among other professions). During training at university, there is no coincidence I’ve spent significantly more time at a drawing desk or in front of a computer compared to the time spent in the physical landscape in question.

Mastering the drawing medium, thus, is key in order to become a landscape architect in some way, at least if wanting to pursue a career within design. To some point, the assertion that creative access to landscape is given by the drawing seems reasonable as lengthy planning processes demand a certain level of standardisation and documentation, making the drawing medium a place for creative exploration while the construction is carried out by someone else:

[...] the actual work of building and construction is usually done by people other than the landscape architect. The instrumentality of modern construction procedures leaves little room for emotive or tactile involvement. (Corner 1992:245)

It would not be possible to ignore the role of the drawings if wanting to maintain standardized and predictable workflow. There is no coincidence that people wanting to impact the landscape by skipping planning processes and the drawing table are called 'guerilla' gardeners.

Nevertheless, the assumption that drawing distances the designer from the landscape can be contested if looking at a particular drawing method used on private estates in 18th century Southern Germany, where drawing on land, in scale 1:1, gave the designer direct impact on land through the act of drawing. Historical gardener Friedrich Ludwig von Sckell used a stick to draw lines on the physical land that later were to be constructed according to those marks (Dümpelmann 2022). By adopting a kind of walking style belonging to the bourgeoisie while letting the drawing stick make marks on the ground, the landscape design naturally suited the higher classes' recreational walks (Dümpelmann 2022). Furthermore, this drawing technique involved the assistance of manual laborers marking out the traces made by the stick (Dümpelmann 2022) - which suggest it being a somewhat expensive approach, and for that reason, probably would not work in a modern, contemporary practice. But as an

example, it does illustrate that architectural drawing does not necessarily imply a physical distance between designer and landscape. As a method, however, it is yet another example of how drawing precedes design.

It is fair to say that the relationship between drawing and landscape architecture is intimate and in some ways, dependent upon each other. It is also clear that drawing helps landscape architects visualize, realise as well as communicate their projects and ideas to third parties. Even though drawing constitutes a range of formats, materials and scales, and it appears in many forms, stages and functions in the profession. I will from here focus on drawings as pictures: or in other words, depictions on flat surfaces.

Among and between landscape architects there are different attitudes towards drawing. Corner (1992) suggests there are two oppositional groups, one that is overly fond of artistic aspects of drawing; and another that seeks objectivity in the technical and instrumental drawings (Corner 1992):

On the one side are those who insist on an irreducible expressiveness, on the other are those insisting on an objective 'realism' (Corner 1992:264).

Neither of these two attitudes recognize the potential of landscape architectural drawing (Corner 1992), which ultimately is a combination of the two (Corner 1992) - the artistic expressiveness (abstract) and the technical accuracy (projections of landscape):

After all, it is just as horrendous to suggest that the designer's free imagination is the source of inventive form as it is to discuss drawing as the sole generator of formal creation. (Corner 1992:264)

Corner presents an approach he calls analogical drawing, where demonstrative drawing and speculative drawing works parallel (Corner 1992). Analogical drawing involves free play, imagination and intuitive aspects

as well as incorporating technical drawing. The qualities lie in its ambiguity, unfinished character and generative function, which "... not only tell us what things might be, but also what they are like" (Corner 1992:274), which suggests that by merging different types of drawing techniques, the quality of the final piece can benefit.

By definition, drawing involves the act of making marks on paper with the use of a pen. But depending on what the drawing depicts, it can be understood as a representation of something (a landscape, for example), making the produced drawing comparable to other representations depicting similar things. This leads to a discussion of drawings as representations, set within the same context as digital images made in other techniques.

### *1.5.1. Visualization culture in landscape architecture practice*

Since James Corner published his thoughts on drawing three decades ago, technological advancements have pushed the role of drawing in other directions. While Corner (1992) discusses the meaning of drawing between different types of architects and different kinds of situations, Stefàno (2020) brings attention to connections to other industries with an emphasis on digital renderings. In today's design culture for example, representations of landscape architecture lack diversity due to an "image-oriented" approach (Stefàno 2020) where production is being outsourced to other professions:

This tendency to abdicate the representation of the project to the visualization professionals shows that representation is no longer considered by many as a fundamental part of the creative process, producing a certain homologation. (Stefàno 2020:41)

Although this tendency may be problematic, I do not agree that it suggests that landscape architects in general deprioritize representation of their projects. On the opposite, my understanding is that many landscape

architects actually are enthusiastic about the visualization of their projects. I believe the tendency to deprioritize representation is more a result of the level of sophistication in visualizations that are generally beyond the skills of landscape architects. That taps into discussions on realism in visualizations, a rendering style seeking to depict a reality as accurate as possible that demands advanced technology (Kullman 2014). No matter if the issue behind the tendency of abdicating representation has to do with depriorization or lack of training, the point is to emphasize its importance that landscape architects control their own visualizations, as landscape representation has the power to influence people's understanding of both the real landscape and the culture in which landscape architects design (Stefàno 2020). Creating representations, therefore, demands awareness, consciousness and intention - characteristics landscape architects generally possess.

So what is emphasized in this section is that on the one hand, making drawings can involve any type of drawing medium necessary to show what it is you want to communicate without sticking to conventions on how a drawing traditionally is made (Corner 1992). It is also important to acknowledge representations as "a window that interprets the world, and that allows us to understand, reason, and create." (Stefàno 2020:46), which then encourages detailed attention to what is actually being represented in an image.

The digital turn mentioned earlier is not only creating a market for landscape architecture representation which professions other than architects can take part of. Upon close inspection, it has also led to the emergence of certain styles, norms and standards in the way landscape design is visualized. Digital advancements and modern computer software allow the creation of hyper-realistic renderings of architectural ideas (Kullman 2014). These realistic representations, with increased sophistication and detailing, may not be suited at all times for different practical reasons: humans do not perceive

the world according to principles of hyper-reality (rarely do things appear so accurate), realistic visualizations present itself as something to be interpreted as real although it may not ever be realized, they result in idealized representations that rarely correlate to the reality and dynamics of the real world, and landscape architects are not trained in being visualizers of such advanced level (Kullman 2014). In reaction to these limitations is a group of visualization principles termed 'loose-reality', which builds upon less advanced, more adaptive and for an intermediate skilled landscape architect, more accessible techniques that satisfactorily serve the purpose to visually communicate certain aspects of landscape design (Kullman 2014). Furthermore, the important aspects of time vegetal growth in landscape design are difficult to represent even when employing realism, although some ways are claimed to be better than others (van Dooren & Nielsen 2019).

So while visualizations of landscape design seem to have progressed into ideals of realism and result in practical limitations, it also creates a certain style to these visualizations that some identify as problematic and even negative. Applying an ethical analysis to visualization culture, representing landscapes comes with a "responsibility to audience, self and professional colleagues" (Kingery-Page & Hahn 2012:69) - implying an encouragement of innovation in reaction to the increasingly standardized visualization styles. Responsibility, thus, lies in avoiding the pitfalls of reinforcing kitsch, mawkish and trite visual effects, details and compositions:

Representations should surely not be easily accepted landscape stereotypes but should instead direct audiences to key issues of a proposal, and then to their own experience of real place. (Kingery-Page & Hahn 2012:69)

This implies a context-adopted strategy for representation as well as a focus shifting from realism towards abstraction, as the latter can help accentuate certain aspects of

a landscape, and thus avoids the decorative and ornamental representations (Kingery-Page & Hahn 2012). For example: if you want to communicate aspects of shadow and light, there is no point adding a flying bird in a picture.

The call for abstraction recurs in other critiques on visualizations as pictorial images - where they are claimed to reduce the landscape to a view without regards to experiential qualities (Corner 1992). By referring to the expressive art of Russian painter Kandinsky, who abstracted feelings, doings and scenes with the use of color and shape, Corner calls on a similar approach to landscape representation (Corner 1992:261) - instead of depicting something 'real', images can be used as communication tools for associative mental processes, as motor for imagination, and therefore allowing abstraction in landscape representation (Corner 1992). However, the flatness of a paper, the static format of a drawing, the predetermined materials as well as the visual focus are all factors of technical limitation (Corner 1992). These factors pose a problem when representing for instance landscape experience which are based on bodily engagement with regards to senses, tactile and temporal aspects (Corner 1992). Consequently, experiential aspects can never be fully imitated or copied as an image: observing an image can't possibly resemble a bodily experience. However, an image can help us discuss, talk about and communicate experiences made in a landscape, without ever making claims that they are equal to the real experience.

From drawing made by hand and body to digital creation of realistic visualizations, it is obvious that pictures can be made in a variety of ways and using a range of different techniques. What does that mean for this thesis? I will approach the creation of pictures by applying a variety techniques, methods and materials to capture the diversity of visual depiction. It has also been argued that the endeavor of creating a scene that appears realistic is not necessarily ideal, although it



at first strikes as the best representation that can be made for a landscape. That is a critique I will use in order to challenge the values I carry myself, coming from an environment where realistic renderings are desirable.

### *1.5.2. In conclusion*

If looking at the use imagery within the practice of landscape architecture, one discovers a great diversity in which a landscape can be represented in a picture. Furthermore, depending on the situation or purpose of the picture different tools and techniques are used. While some drawings are used to quickly communicate an idea for a colleague (sketches, quick drawings), a technical drawing to instruct (elevations, plans), and a computer generated perspective may be used to beautify a vision being showcased for an entire neighbourhood (perspectives, illustrations). The recipient of the picture is therefore a factor that determines the use and purpose of a representation. In this thesis, the focus lean towards the latter and the realm of digital landscape visualization where a design project is represented in digital still pictures. Although I do not seek to represent a design project, the discussion on the results will revolve around visualization culture.

## 2.0. Theoretical framework

---

In this chapter I will sketch out the theoretical background for this thesis. First, the framework which is used to describe landscape experiences will be presented, one that draws inspiration from three currents of thoughts from the philosophy of aesthetics.

### 2.1. Understanding visual experiences according to aesthetic theory

This thesis will draw upon the philosophical field of aesthetics in order to understand experiences of landscape. More specifically, aesthetic theories explaining sense perception inspired both by phenomenological ideas as well as formalist ideas are used to construct a theoretical framework which will allow me to identify and describe landscape experiences. The phenomenological inspired theory of aesthetics, focusing on sense perception, should not be confused with criticism of style or the doctrine of beauty - such discussions are beyond the scope of this thesis.

Aesthetic experiences can either be regarded as internal or external (Shelley 2022). If appealing to the features or properties of an object that is being perceived, external theory applies. If instead looking at the experience internally, with regards to temporal aspects and perception, internal theory applies.

Developing a theoretical framework using both external theory and internal theory will allow me to look at experiences with regards to both the environment and the individual's experience. Together, these perspectives provide a nuanced lens through which visual aesthetic experience can be identified, described and interpreted.

### 2.1.1. *Everyday aesthetics: what activity is the experience?*

According to the ideas of everyday aesthetics, experiencing something aesthetically involves a continuous interplay between the experiencing body (a person) and the object of aesthetic appreciation (Dewey 1934). Such an interplay draws attention to temporal and progressive aspects of having an experience (Dewey 1934), such as the development from having an initial impression to a final appreciation of something. Aesthetic experience is claimed to develop over time through a processual encounter where different phases, or engagements between subject and object, accumulate into a final fulfillment (Dewey 1934). In this temporal regard, landscapes are not an exception, as the aesthetic appreciation for landscapes takes time to evolve and is not immediate (Meyer 2015:36).

However time consuming an aesthetic experience may be, according to Dewey, another fundamental aspect is that objects of aesthetic appreciation can be almost anything a person finds satisfactory to perceive, whether that is an artifact or an activity. By drawing attention to the beauty of everyday situations, it is possible to put objects such as a flower, a landscape or a conversation in focus as objects of aesthetic appreciation:

A piece of work is finished in a way that is satisfactory; a problem receives its solution; a game is played through; a situation, whether that of eating a meal, playing a game of chess, carrying on a conversation, writing a book, or taking part in a political campaign, is so rounded out that its close is a consummation and not a cessation. (Dewey 1934:37)

This view on aesthetic experience will form the first part of the theoretical framework: the activity. I will, concretely, use this theory to illuminate and describe what activities, whether it is walking, gazing, talking or running that are involved in an experience.

### *2.1.2. Formalism: what is the appearance of the landscape?*

Externalist theory, in particular formalism, focuses on the formal properties of an object being perceived (Shelley 2022), and separates form (appearance) from content (meaning) (Peacocke 2023). Applied to a situation of experiencing a painting for example, the formalist theory suggests that composition triumphs symbolic value (Peacocke 2023).

For works of landscape architecture, formalist theory allows us to look at the appearance of a landscape. Aesthetic value of designed landscapes can be understood according to the properties created by an architect (van Etteger et al. 2016). Formalist theory appeals to the appearance and the look of a work of landscape architecture, which van Etteger et al. (2016) exemplifies with The High Line project in New York, landscape parks and a renaissance villa garden. Using that logic in the case of Kvarnholmen, a neighbourhood which is a result of a plural intentions would not work. As the planning and design of the area are the results of multiple architectural ideas, it poses a problem in recognising Kvarnholmen as one artwork as it is not one singular work made by one (group of) architect(s). As I do not seek to evaluate design, however, formalist theory can still be used to draw attention to appearance in the case of Kvarnholmen.

I will peel off the aesthetic layer of formalism and instead employ this theory to draw attention to external features, formal properties and the appearance of Kvarnholmen in relation to the experiences found during the field study, without discussing the aesthetic value of such experiences, or how these experiences are constructed by architects. This way, the complexity of the built structure in Kvarnholmen does not hinder the use of formalism theory to look at the external, formal properties of what is seen in the landscape.

### *2.1.3. Engagement theory: what is the response to the environment?*

When attention is not focused on the properties of artistically made artifacts or objects, elements of entire surroundings can become objects of aesthetic appreciation. This view of aesthetics is fundamental to the concept of environmental aesthetics, which describes environmental appreciation according to the way in which humans engage in the world (Berleant 2013); even applicable to urban environments (Berleant 1984).

According to Berleant's theory of engagement, the significance of aesthetic experiences are based on the ability of an environment to trigger engagement, impose responses and encourage participation in people (Berleant 1984), such as the encouragement for walking by a path or the encouragement of climbing by a staircase (Berleant 1984). In this regard, aesthetic experience is understood according to "particular features in the environment that impose themselves on the perceiver" (Berleant 1984:39). This theoretical point of view offers a way to make connections between the physical elements in Kvarnholmen to the bodily responses and impressions. This is operationalized by asking what triggers a certain response, whether it is walking in a certain direction or getting a certain impression. For example: Why do we walk towards the water? - because we saw a glimpse of the sea.

## 2.2. An overview of the framework

The framework consists of three parts that together make an experience according to the following simplified equation: Activity + Appearance + Response = Landscape Experience, as illustrated in figure 1. Furthermore, this framework corresponds to what Arnold Berleant (1984) explains as three different models of how one interacts in an environment.

It seems apparent that understanding experiences is complex as it involves mechanisms on a subjective and personal level. Even though the framework simplifies an experience and offers no tool for evaluation, the framework can help to identify and describe engagements in a landscape in a systematic manner. This way, experiences that we have in Kvarnholmen can become quantified and made visible, allowing me to use that empirical material as a basis for creating pictures.

## 2.3. Subject-object relationship: what is my position in these landscape experiences?

Whatever theory is used to understand a landscape experience, the dualism of the subject (the person experiencing something) and the object (the thing that is being experienced) is central, although this dualism can be viewed differently. Externalist theory suggests that the subject is perceiving something from a distance by observing an object. Internal theory, on the other hand, suggests that the subject and object reciprocally interplays in ongoing experiences (Dewey 1934).

In this thesis, two participants plus me are the subjects, while the landscape of Kvarnholmen is the object.

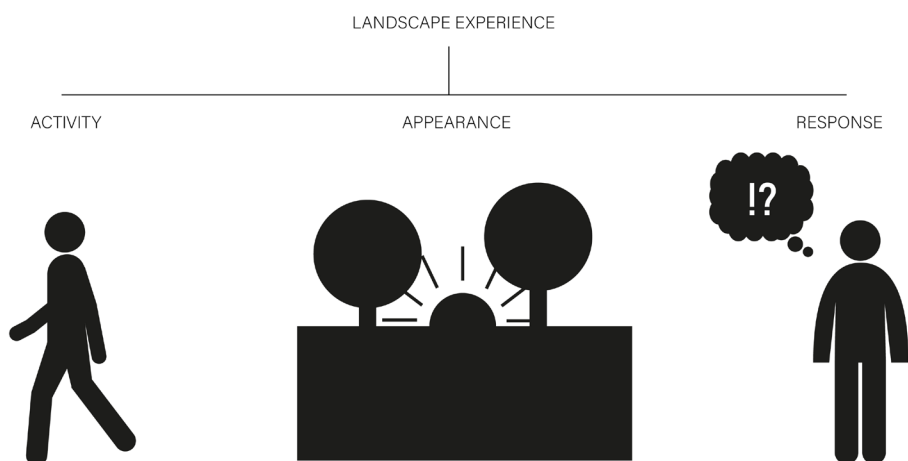


Figure 1: Illustration showing the theoretical framework in conclusion.



## 3.0. Methods and materials

---

### How the exercise was conducted

The exercise conducted in this thesis consisted of three different, overlapping phases: *Experiencing*, *Picturing* and *Reflecting*. In this chapter they are presented in a chronological order where the content of each phase is further explained. An illustration of the methodology is shown in figure 2. Firstly, I will briefly present the landscape of focus in this exercise, Kvarnholmen, and explain how it serves as a good case for this particular cause.

#### 3.1. Case: Kvarnholmen in the Stockholm archipelago

Geographically, the case study is confined to Kvarnholmen, a former industrial area on a peninsula situated in the Stockholm Archipelago. Kvarnholmen consists of a diverse range of landscape elements: water, hills, vegetation, housing, parks and playgrounds. With built structures of historical value, existing housing as well as planned public space Kvarnholmen sets an example of an urban site which development landscape architects typically would get involved in for a Swedish context. As an example of a large scale development area, drawing attention to experiential qualities in its current condition seems interesting in contrast to the many ways its future qualities are represented (Kvarnholmen utveckling AB u.å.). The results concerning experience will, inevitably, be site specific to the area of Kvarnholmen. However, aspects concerning landscape representation are relatable to a wider scale of projects - beyond the boundaries of the coastal landscapes of Stockholm.

One of the main reasons for choosing Kvarnholmen as a case is because I have no previous relationship to it. I deemed it important for me to study a site I have previously little to no experience of in order for the results not to be influenced by personal attachments

to a place nor any earlier memories from it.

#### 3.2. Phase 1: Experiencing

In the first phase, fieldwork was conducted in order to "collect" experiences in Kvarnholmen. I visited the site together with two other landscape architecture students for three hours during the morning of February 24th. The purpose of the visit was to walk around the landscape and explore the site with the encouragement to capture, through notes and words any visual aesthetic experiences that we had. The participants brought experience of doing fieldwork as well as a professional interest in conducting the exercise.

The three of us arrived there by bus departing from Slussen in central Stockholm. Upon arrival, I presented the purpose of the fieldwork and handed out easy to handle equipment for data collection: paper and pen. I gave no directions on where to go, thus giving the participants full control of the walk. The entire route, which mainly goes through residential areas, is shown as a yellow dashed line in figure 3. I encouraged the participants to verbally express their responses to the landscape. As we visited the site together as a group we helped each other to pay attention to different things, putting words to impressions as well as pointing out elements of interest. This resulted in a dynamic where

our individual experience of Kvarnholmen was influenced by the way in which we as a group experienced the site and interacted with each other on a social level. My role for the day was to observe while engaging in the walk and the conversations. I asked the participants why, what and how they experienced something particular, and recorded material by taking notes in a notebook.

All collected data were anonymised to the extent possible, and consent with participants was made in connection to the field study. In the afternoon post field work, the data collected was transcribed and sorted in a digital document. The transcribed material, (notes in the journal), was then sorted and pinned according to their corresponding situation in Kvarnholmen. This meant that all notes concerning one specific situation was gathered into one group, understood as 'one experience'. This material was then interpreted according to the theoretical framework, where a description of each found experience was made by seeking answers to the following questions: what activity was the experience, what was the appearance of the landscape, and what was the response to the environment?

### 3.3. Phase 2: Picturing

After identifying and describing experiences that the participants and I had in Kvarnhol-

men, these were “translated” into pictures by me. An arts-based inspired method was employed where the process of creating pictures was seen as a means to investigate challenges of “translating” experience into a picture.

This method was based and dependent on an awareness around the process of creating. As constructivist design research, this method sought to explore rather than prove (Lenzholzer et al. 2013). As with other qualitative research, arts-based research is based upon the idea that knowledge is constructed by experience, not solemnly something to be proven and discovered (Greenwood 2019). It involves the integration of any form of artistic process within a research context, whether it being for data collection, analysis or presentation (Greenwood 2019). In this case, the artistic process was employed to investigate the limitations of still picture media.

The inspiration for this method came from a study exploring how time aspects, in particular the aging of oak trees, in works of landscape architecture can be represented as illustrations (van Dooren & Nielsen 2019). Here, a group of students conducted a task where they were asked to represent the vegetative growth of a park belonging

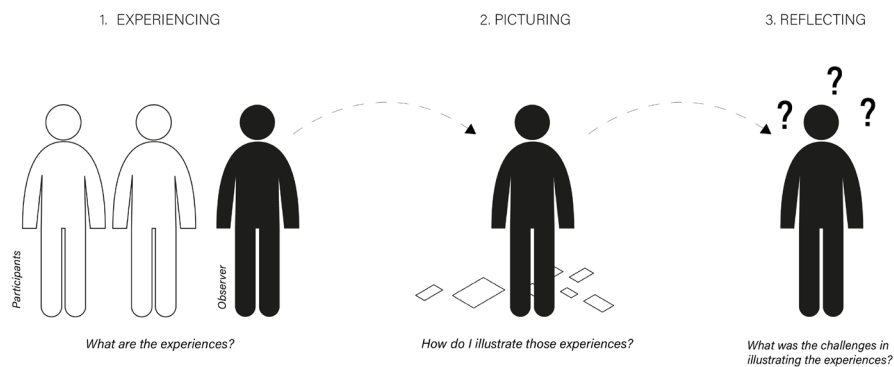


Figure 2: Illustration showing the methodology in a sequence, illustrating the different phases in relation to each other.

to a residential estate in Denmark. The tasks were made in an experimental environment. The results from the study showed a great variety in how time can be represented and explained by using drawing and digital tools.

With the use of pen, paper, computer and software tools available to most landscape architects, sketches and pictures were created systematically where numerous sketches and drafts were made using an experimental approach. When having described an experience, I used pen and paper to sketch out a few ideas for a representation, to then source material from Pixabay as well as generating pictures with the assistance of Open AI's DALL-E 2 using text prompts in English. This material was then put together in either Adobe Illustrator or Adobe Photoshop where a final picture was created by modifying and editing the material to a "finalised" representation of the experience. Where AI was used, the figure text reads "*This image was created with the assistance of AI.*" according to Content policy (OpenAI 2022).

Whereas a "usual" visualization process may start with a 3D model that is rendered through a software programme, in this thesis I based the representations on a described experience without the intention to display any technical data in the picture. It can seem ironic that a thesis investigating experiences in a corporeal landscape are so desktop focused, however, in order to draw parallels to a professional practice, it was considered necessary.

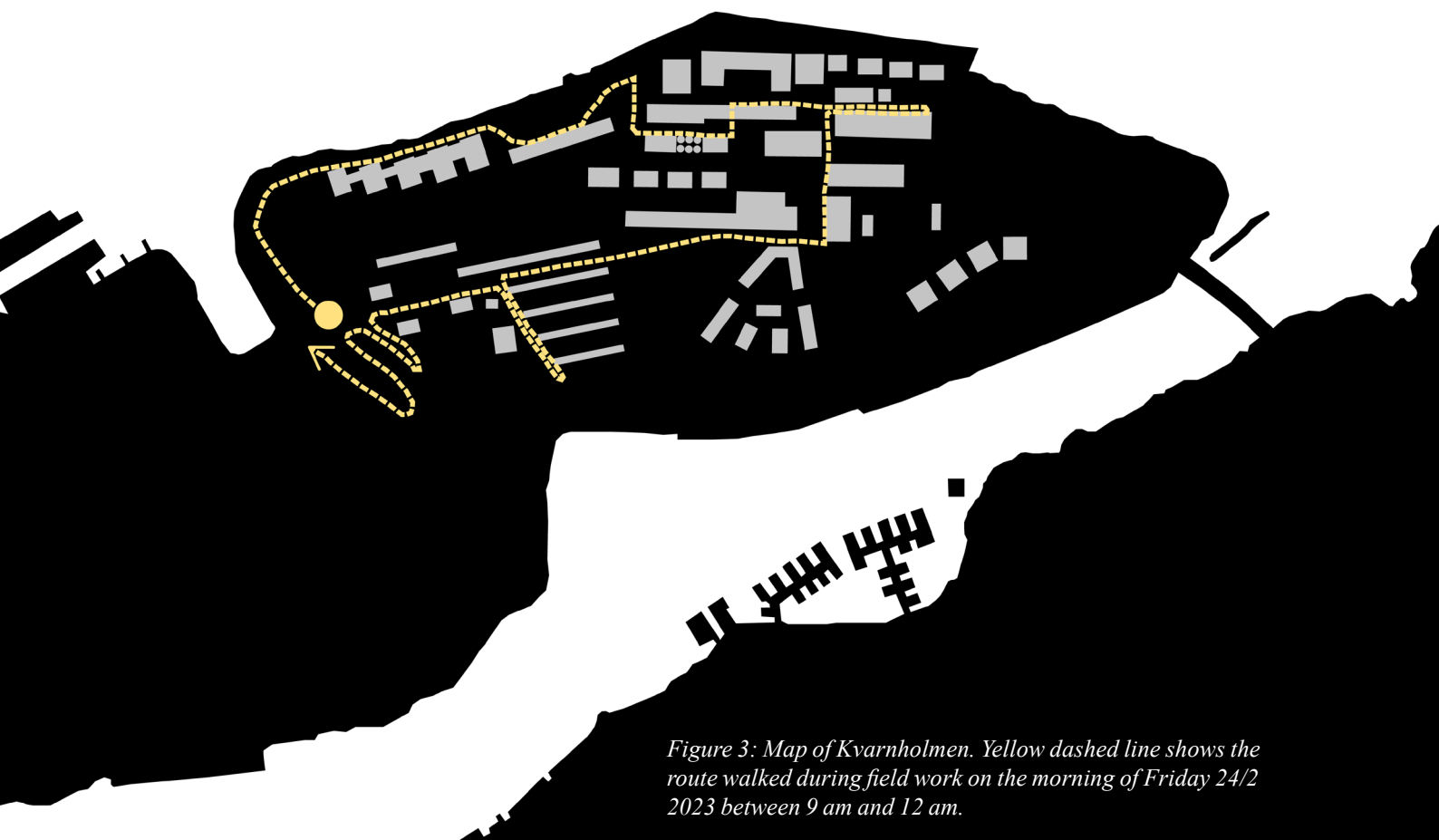
Karl Kullman's (2014) proposed principles of loose-reality visualization were used as references when working with digital medium. Furthermore, James Corners (1992) analogical drawing set an example on how to integrate multiple drawing techniques into one single piece. Reflections were made in a journal along the way. Therefore, decisions, insight, ideas, visions, challenges, puzzles and concerns were documented continuously.

In cases where photographic material is downloaded from online databases, any people that are visible on any photograph are made unrecognisable due to GDPR regulations. As consent is required when using other peoples' faces as part of your own work, an active decision to exclude such imagery is taken.

### 3.4. Phase 3: Reflecting

All work made in phase 1 and phase 2 were in a third phase reflected upon from an autoethnographic standpoint and from the perspective of the participants experience of Kvarnholmen. Here, the processes of the earlier phases (Experiencing and Picturing) were scrutinized along two foci: interpretation (translating experiences from one form to another) and creation (technical aspects of producing pictures). This way, connections between how I understand landscape experiences (others as well as mine) and how I depicted those in pictures could be made. For example, by scrutinizing a picture I created: "how is the response depicted in this picture?" and "in what way does the activity show in this picture?".





*Figure 3: Map of Kvarnholmen. Yellow dashed line shows the route walked during field work on the morning of Friday 24/2 2023 between 9 am and 12 am.*

## 4.0. Results

---

### Experiences in Kvarnholmen depicted in pictures

What follows in the coming pages is a presentation of a selection of experiences, with both a verbal description as well as examples of visual representations created using different tools. Under each heading, one experience that I, together with the participants, had in Kvarnholmen during the field study is presented. These examples illustrate different aspects of the challenges faced when translating an experience into a picture. As well, these examples also demonstrate some insights that were made on technical aspects in creating visualizations with the materials and equipment used. Within each heading a description of the landscape experience is made to set a context, followed by reflections on the process of understanding those particular experiences and ultimately translating those in pictures.

Some pictures are more or less abstract and some may even appear odd or foreign for a context of landscape architecture. For the purpose of exploring challenges in creating landscape representations, the picturing phase involved both trial *and* error.





*Figur 4: Digital representation made by the author, depicting people outlooking the sea and the horizon where construction cranes are upscaled and distorted to draw attention to their visual impact in the city silhouette. This image was created using Adobe Photoshop with photographs from royalty-free databases.*



Figure 5: Same sketch where figures, or subjects were placed in the foreground. Representation of a landscape experience involving the outlook over the sea - with feelings of being distant, yet close, as well as appreciating the beauty of construction cranes as part of a city silhouette.

#### 4.1. Experience: A sensation of being close yet far

After walking for a few minutes on a path leading to the quayside, we were intrigued by a glimpse of the sea, which led us in the direction of the water. When reaching the waterfront we stopped to look out over the sea in the direction towards the central parts of Stockholm. Between us and the city were boats and ferries passing by, indicating transportation of goods or people. Because of the foggy weather and the mist covering the sea, one had to concentrate in order to discern what appeared in the distance, which made us respond by looking even closer. The silhouette of central Stockholm consisted of high rise buildings, waterfront housing, construction cranes as well as the amusement park Gröna Lund. According to one participant, the construction cranes were emphasized as contributing factors to a feeling of being in an urban region, where things happen, yet observing it from a distance. The other participant expressed that sensation in particular as being rather beautiful.

#### 4.1.1. Translation and creation

Judging by what I perceived and the comments made by the participants, a sensation of being close to the vibrant city center while still being far away in spatial terms was a central part of this experience. The most apparent landscape element creating a spatial distance between our standpoint and the Stockholm centre was the sea, hence represented as a large part of the picture that in turn makes it hard to oversee when viewing the picture in figure 4.

By adding boats that go in the opposite direction of where this “perspective” is seen also gives a clue that there is traffic departing from this place, rather than arriving. The boats were placed in the picture in order to create a sense of being left behind or to depict remoteness, which in turn would reinforce the feeling of being far away from a city in the horizon.

Construction cranes appeared as a dominant part of the city silhouette and stood out from the rest of what was visible. The construction cranes are temporary elements as they are placed in a certain area to facilitate construction of buildings - meaning that “something

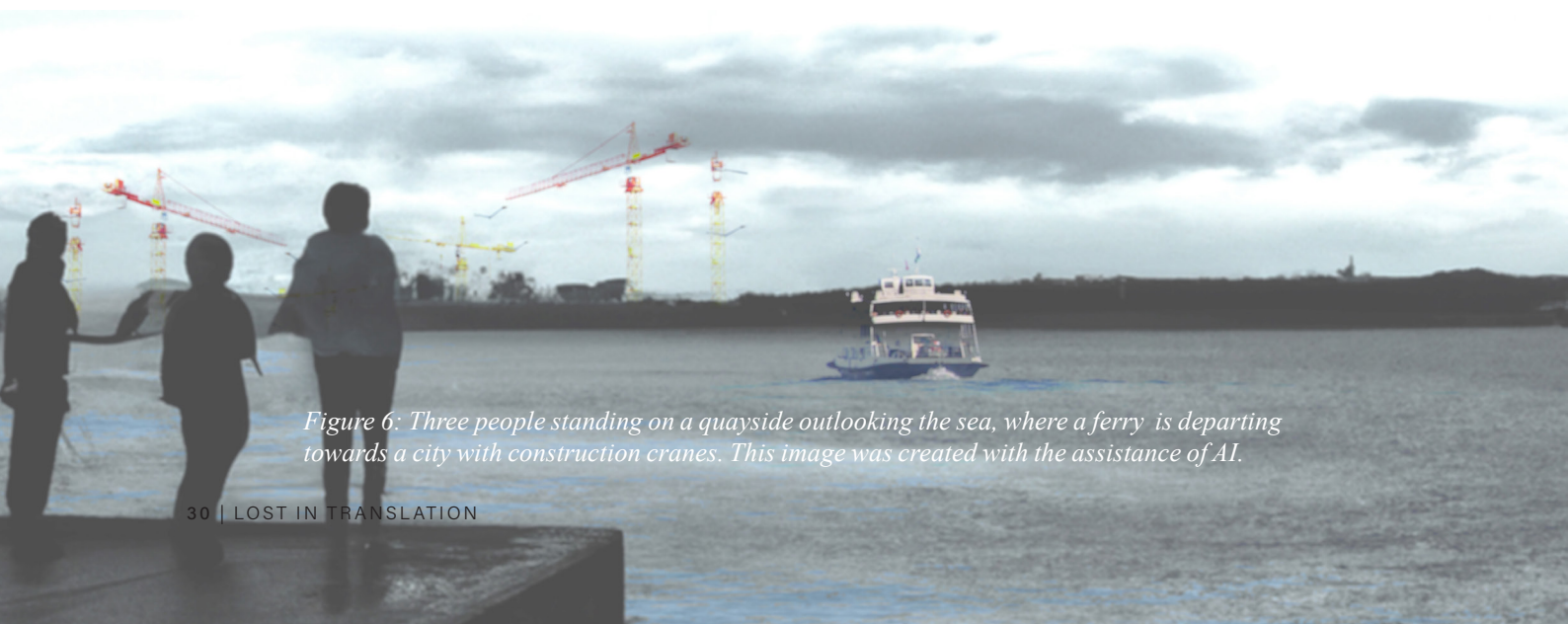
happens” and development is under way. By exaggerating the size of the construction cranes in the picture as well as arranging them in a way completely off perspectival rules, they become dominant and center of attention in the picture, and I go on to assume that they will not be overseen by anyone looking at figure 4. If the construction cranes were to be depicted accurately and ”realistically”, they would likely not strike as equally dominant as to how they were actually experienced when I was standing on the quayside looking towards the silhouette. So although the picture in figure 4 is completely ”unreal” and distorted, it somehow raises awareness around construction cranes as a visually striking element in a silhouette.

The activity that facilitated the experience was to stand on the quayside while overlooking the sea. Although the people holding hands in yellow raincoats in figure 4 are unknown, inserting them into the picture as subjects gives anyone looking at this picture an opportunity to imagine and identify with them. *What do these people do, or think?* As a figurative element, they create narratives for the picture as the people in yellow raincoats seemingly look like they are perceiving something. To demonstrate this point, in figure 5, the people have been removed. What becomes evident is that the people figures of-

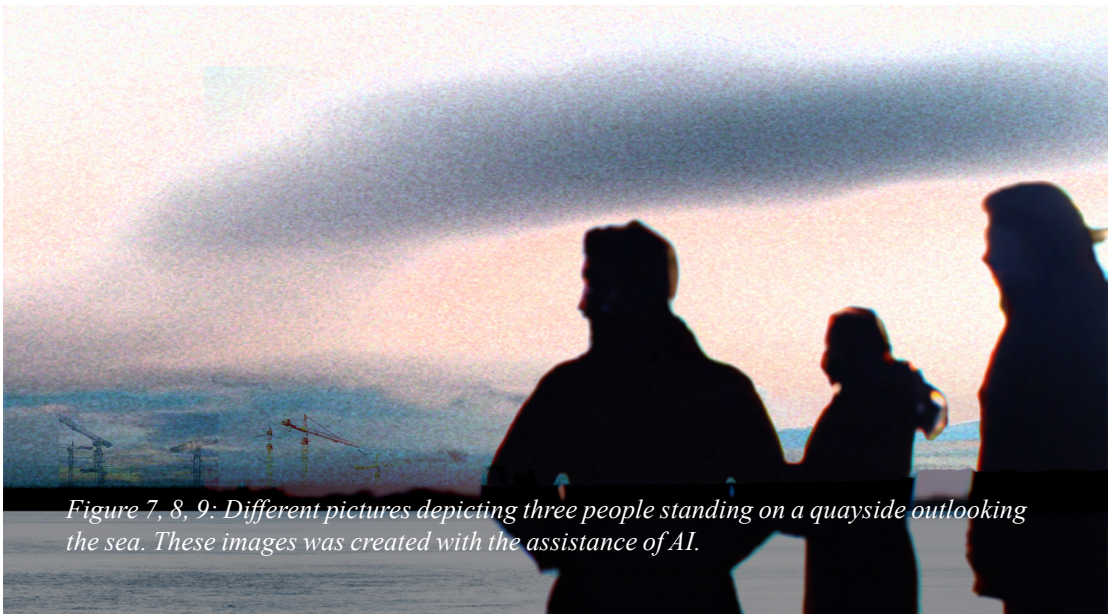
fers a sense of animation or action - they suggest an activity is taking place. Furthermore, the people also contribute to a spatial illusion by creating a depth of field when blurred.

To elaborate further with figurative pictures, I used text prompts such as *“A photo showing the silhouette of three people standing on a quayside next to still water”* (for the AI, see figure 7 and 8). At first, these pictures struck me as being representative to the activity of standing on the quayside in all its simplicity, and the glittering appearance of the water express atmosphere. However, these pictures lack some important aspects in a closer look: the horizon line and the feeling of being close yet far (from the city).

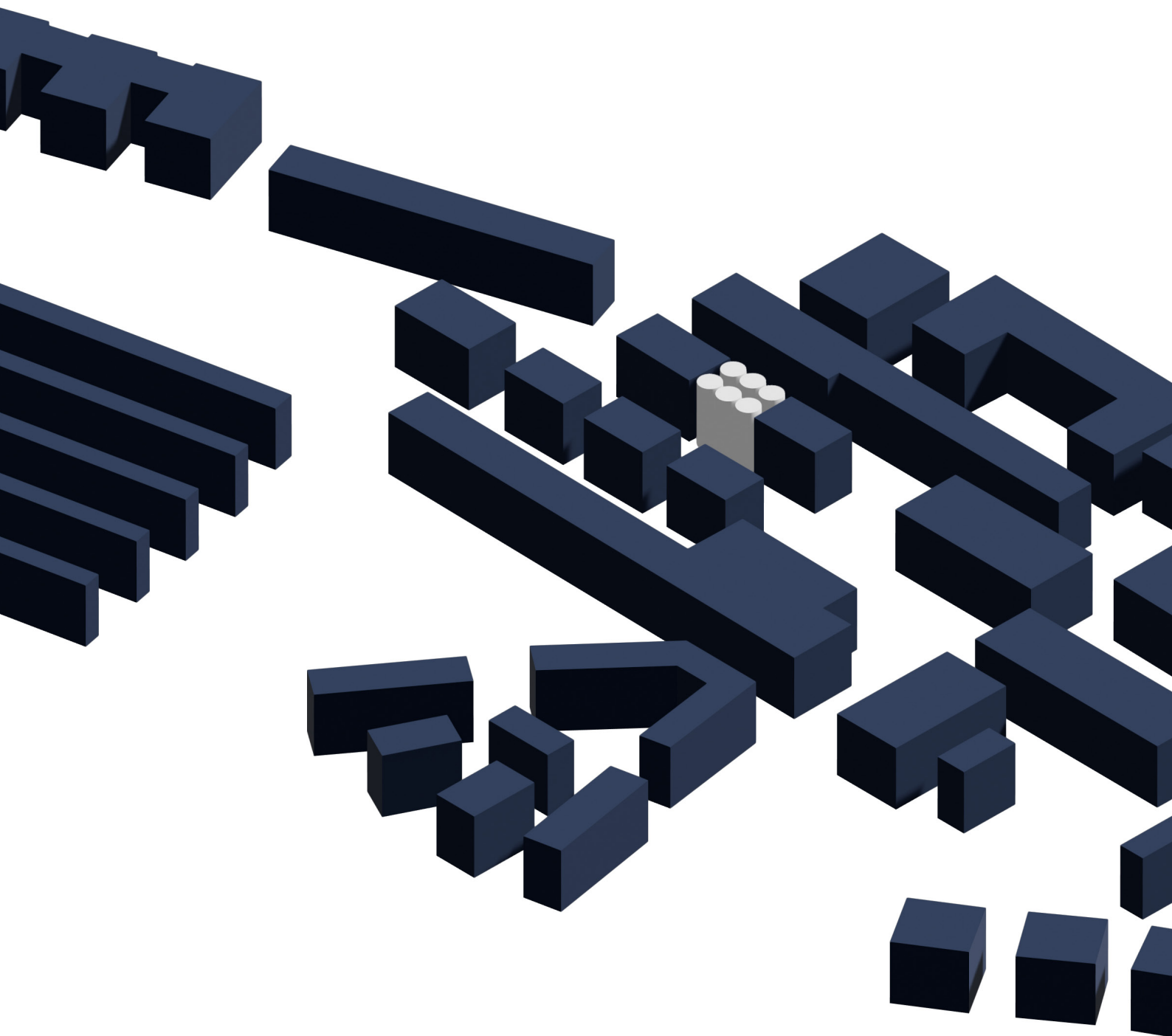
This flaw was adjusted by using the prompt *“A photo showing the silhouette of three people standing on a quayside next to a still water, outlooking the sea, with land and city silhouette in the horizon, on a cloudy day”*, which generated better pictures that I could proceed with, see figure 6 and 9. The human silhouettes worked well to place in a picture where construction cranes, ferries and horizon line are in place. However, it becomes apparent to me that the light, shadow and the sky are central parts to how a ”landscape view” is understood as it determines the atmosphere and mood for the entire picture.



*Figure 6: Three people standing on a quayside outlooking the sea, where a ferry is departing towards a city with construction cranes. This image was created with the assistance of AI.*



*Figure 7, 8, 9: Different pictures depicting three people standing on a quayside outlooking the sea. These images was created with the assistance of AI.*



*Figure 10: A simplified landscape model of Kvarnholmen in isometric perspective, illustrating the volumetric conditions of the built structure of the site as well as highlighting a seemingly neglectful irregularity (light grey cylinders) in an otherwise quadrangular environment (blue forms). The illustration was created using Adobe Illustrator.*





*Figure 11: An abstract representation of how the interplay between different shapes and forms lead to an impression of harmony. This image was created using Adobe Photoshop.*

#### 4.2. Experience: Experiencing forms as harmonic

Once we came to walk around the residential area, where high rise buildings and apartment blocks stood tall on each side of us, the participants drew attention to the built structures that surrounded us and comments were made about contrasts in shape and form. A conversation regarding the topic was initiated when standing next to multiple monumental silos that are part of a former industry in Kvarnholmen. One participant made a sketch that portrays the differences in shapes, where the cylinder formed silos interplays with the otherwise perpendicular and angular architecture. This was noted as an “interplay between different shapes and forms that harmonizes as a whole” (quote by one participant).

When being in a surrounding where one expects straight lines and rectangularity (with a focus on built structures), seeing unfamiliar volumes appear in the field of view challenges ones perception. That attention is then fixed on something that appears different and irregular, in this case the silos. The fact that

the participants stopped to comment upon this indicates that an interruption (cylinder) in a pattern (straight lines and right angles) can catch one’s attention with regards to the properties of the built environment.

##### 4.2.1. Translation and creation

Even though the silos are such a neglected portion of the entire built structure of Kvarnholmen, as illustrated in figure 10, they still manage to attract one’s attention effectively when being in the corporeal landscape. Would the harmony, as expressed by the participants, endure if balance between shapes and forms was different, or does the harmony appear thanks to an irregularity, or interruption, in a pattern?

One challenging thing about capturing this experience was the temporal aspect of it: the activity as well as the response. The experience is not just about one scene or view from one particular standpoint, but is imposed on the experiencer by walking through the site and paying attention to the surrounding over a longer period of time, which is difficult to capture in a still image.

While there are examples of how to illustrate long-term growth of trees in a landscape (van Dooren & Nielsen 2019), the temporal aspect in this case is rather different as it relates to the human perception of spatial conditions, and not to a calculated increased volume of a physical object. There is therefore a difference in how to access the information if comparing growth of a tree and a temporal human experience of a landscape.

For this experience the dimensional differences between a landscape experience and a still picture became obvious. Moving around the site and register the environment as a progression towards accumulation (seeing forms as harmonic), is perhaps what everyday aesthetics would describe as a development of an experience over time. Even though the participants expressed their observation once (at the silos), what was being perceived in the environment before was perhaps just as crucial for observing harmonic relationships in the built structure. In other words, the participants experience is context dependent, both spatially and temporally. Therefore, it is not possible to fully replicate those experiences.

By viewing figure 10 one can understand that some forms contrasts to others as they differ in both color and shape in the picture. Due to the simplified manner in which the picture is created, it gives a clue about one

aspect of the built environment in Kvarnholmen, rather than resemble an experience of forms. On the contrary, the picture is rather flat, unatmospheric and unexpressive and is therefore an example of a representation that shows only one element without depicting other aspects.

In an attempt to create a picture that perhaps appeal more to the appearance of the experience an abstract representation was made that also includes a photography of housing in contrasts to circles, see figure 11. Although this picture depicts houses seen from below, there is still nothing that suggests how walking inbetween houses would make you reflect upon the form of what you see. Also in figure 12, where a street view of cylinder forms in 3D is represented, there is still something missing that would suggest movement or walking. In both these examples, the two dimensional format hinders a sense of mobility and depicts a place devoid of activity and movement. However, when using figures as part of the narrative in the picture, as in figure 13, the appearance of different shapes and forms as we experienced them can better be understood if getting the opportunity to imagine what kind of built environment the three people are walking among.



*Figure 12: Cylinder formed silos seen from street perspective. This image was created with the assistance of AI.*



*Figure 13: Cylinder formed silos next to rectangular houses with three people in the foreground walking around the built structure. This image was created with the assistance AI.*



*Figure 14: A view of a sea with red brick houses surrounding. This image was created with the assistance of AI.*



Figure 15: A distorted and surreal picture of brick buildings "framing" the sky, seen from a frog perspective. This image was created with the assistance of AI.



Figure 16: A photomontage where multiple views have been compressed into one panoramic picture, which is suppose to depict an experience of getting surprises when peeking around the corners of buildings. This image was created with the assistance of AI.

#### 4.3. Experience: Surprising views and excitement

For this experience we took a public elevator that connected the quayside and the surrounding areas at a higher altitude. The presence of the elevator reveals that the natural land formation of Kvarnholmen is rather hilly and that technical solutions are necessary for accessibility purposes. Once reaching the top we headed through aisles, corridors and pavements leading through, in between and around buildings. Although high rise buildings surrounded us, the walk on the pavements high up in the terrain offered a landscape experience by disclosing certain outlooks that appeared between red brick houses, which were a dominant kind of facade seen on houses in Kvarnholmen. These outlooks, as seen between buildings, was commented upon by the participants as "windows" due to the framed picture plane. At one point, we stopped to drink coffee at a particular place. Here, one participant expressed that these windows resulted in a experience of excitement as one does not

know what the view will look like when walking around the site and arriving at a certain spot: it creates an element of mystery and surprise, offering snapshots of different views throughout the built landscape. Key elements to this experience was the higher altitude and the solid brick facades blocking the sight lines and the recurrent outlooks appearing along the walk. This is to me a good example of when a landscape (high altitude, landforms, pictorial views) and housing (brick material, interrupted sight lines) works jointly in a way that offers aesthetic experiences to someone.

##### 4.3.1. Translation and creation

The framing effect given by the houses is depicted in figure 15, where a blue background (a sky) was added as a complementary color to the color of the brick houses. Here, sharp contrasts between background and foreground is created in order to highlight how built structure influence the way we perceived the rest of the environments, such as the sea, sky or ferries. However, the

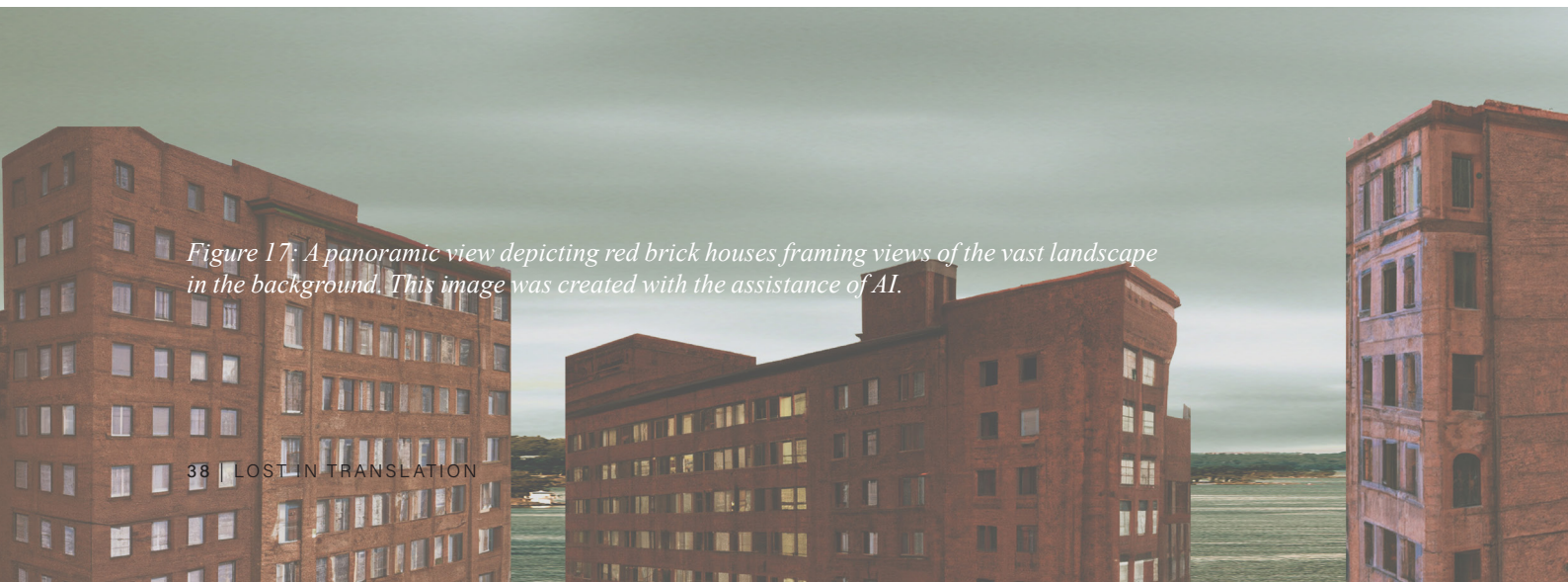
squiggly lines in figure 15 gives associations to irregular and narrow alleys like the sort found in an old town, for example. Such a misconstruction between what was intended to be communicated through the picture (houses framing views) and what the associations the picture gives by looking at it (old town alleyways), sets an example of how detached a picture can be without explaining its context, and this representation should be considered a less successful example of how this experience is represented.

Another picture was made in panoramic format, see figure 16 for full size and figure 14 for a close up, where a series of different views are embedded and compressed next to each other, creating a rather surreal picture. The idea was to show a diversity in outlooks that we experienced during our visit at Kvarnholmen. Thanks to vertical elements (houses) it is possible to understand that outlooks appears in between buildings, and the almost careless mounting of multiple pictures in the photomontage in figure 16 suggests a rhythmic appearance. Other than that, there there is no clues of movement or walking in the picture, and on behalf of the beholder, nothing suggests that the views

were perceived from the activity of walking around or drinking a coffee.

In an attempt to picture the interplay between red brick houses and glimpses of outlooks, a more direct and graspable panoramic photomontage was created, see figure 17. In short, the only elements in this montage is the landscape view (background) and red brick houses (foreground), which leaves little room to understand anything other than how these two elements appear together. The tilted houses adds thrill and energy to the picture thanks to the diagonal lines which was supposed to address the "excitement" of the experience. As the panoramic view in figure 17 is seen from one standpoint and suggests no movement, this picture was dissolved into smaller pieces in an attempt to represent a sequence of views with "breaks" (white borders) in between, see photo collage in figure 18. If reading the collage from the top left to the bottom right, one can understand a little bit of motion, or at least a sequence.

*Figure 17: A panoramic view depicting red brick houses framing views of the vast landscape in the background. This image was created with the assistance of AI.*





*Figure 18: Snapshots of figure 17 mounted as a collage. These images was created with the assistance of AI.*



## 5.0. Discussion

---

A discussion on the challenges and possibilities of picturing landscape experience

The results illustrate examples of how lived landscape experiences can be "translated" to pictures. Furthermore, they point towards some challenges, many which have been raised before. For landscape architecture, the separation issue (a picture is distanced to a landscape) as well as the dimensional issue (3D to 2D) is already well examined, and this thesis merely emphasizes those issues. What I would like to focus on in this discussion, however, is the translation issue: what are the implications in translating a landscape experience into a visual representation? The results will also be discussed with reference to visualization culture in practice. Finally, reflections on the methodological concerns are raised.

### 5.1. Visual representation involves interpretation

The experiences that we had in Kvarnholmen have been interpreted through multiple stages - taking the representation of the experience further away from the moment it happened. Unsurprisingly, this distance exemplifies that "Design images are inherently isolated [...] in space (in the sense that the flat image is nearly always physically removed from its real three-dimensional site)" (Kullman 2014:21). As I created the pictures after visiting the site to simulate a usual visualization process, the pictures were removed from the landscape they sought to represent. It can therefore not be considered as an approach employing drawing as a tool to investigate on-site conditions (Kabir 2012). However, through reflection I have tried to demonstrate what insights I have gained by conducting this exercise - which could be seen as knowledge that could benefit others seeking to conduct a similar task or looking into the use of visual media within landscape architecture. It is in that regards I believe the results can function best, as either inspiration or examples of silliness for a wider discussion on imagery in relation to landscape architecture.

It has become apparent to me that the definition of an experience is fluid, inaccessible and abstract. The application of internal theory to other peoples experiences may have caused that insight, as internal theory seeks to explain experiences according to how someone is affected by doing something (Dewey 1934). Furthermore, the plural meaning of an environment (Kvarnholmen in this case) according to environmental aesthetics, suggest that "the environment cannot be objectified" (Berleant 1984:42). I have, however, managed to objectify the landscape of Kvarnholmen in some way, although a consequence is that bodily experiences are being rounded off and reduced (Corner 1992), in relation to its once lived counterpart belonging to a specific time and place in the past.

In situations where internal descriptions of an experience were few, external theory and formalism offers theoretical aid to distinguish landscape experience as an appearance. This was useful as it enabled the representation of an experience according to a pictorial view, which can create an illusion of depicting "depth and spatiality of a scene



at eye-level from a certain vantage point” (Corner 1992:258). I therefore found the appearance of the landscape in each situation as easier to depict compared to internal aspects of the experiences.

### 5.2. Depicting activity, motion and responses as suggestive pictures

Although less advanced visualization techniques and abstraction are argued to be well suited for the task of representing landscapes (Kullman 2014; Kingery-Page & Hahn 2012), I found it necessary to use figurative elements, such as people in the foreground, in a picture in order to depict activity. However, by blurring the figures or making them less clear (or more abstract), it can “evoke mystery and ambiguity” (Kingery-Page & Hahn 2012) that engages one’s fantasy (ibid.), thus making such pictures suggestive rather than accurate representation of an activity.

The challenges I faced when attempting to represent actions or motion is not too different from the difficulties of representing time-based processes (van Dooren & Nielsen 2019), as they both involve elements of progress: a person is moving from A to B or a tree is growing from size X to Y. While the growth of a tree can be calculated and explained in diagrams (ibid.), what someone spatially experiences while walking around a landscape can not be depicted without “gross simplification, for it is not all-measurable” (Corner 1992:247).

### 5.3. The pictures in relation to professional practice

I do not wish for the pictures created in this thesis to be viewed as anything other than one person’s attempt to explore a complex topic that assumingly other landscape architects have different views and opinions on. Just as James Corner (1992) points out that appreciation for the drawing medium varies in the profession, the relevance of the pictures created in this thesis can be disputed in a similar way: some may find them

annoyingly abstract while others appreciate their vagueness. No matter the significance of the pictures created or the use of them in a professional context, they do exemplify that a landscape experience is something very complex to articulate in a picture, and particularly someone else’s experience. Surely, the latter requires more profound methods not used in this thesis as I have only scratched the surface of what a visual landscape experience can be described as. Worth mentioning, though, is that a more detailed description of the experiences would not favor the process of translation as the difficulties refer to formatting limitations, rather than a lack of empirical material.

If shedding some positive light on the pictures created in this exercise, I can see this kind of imagery, one that addresses experiential qualities of a landscape, being used in a context where technical accuracy is not necessary: for a welcoming sign to a nature reserve, a report of a landscape analysis or for a concept board in an early design process. It is harder to believe, on the contrary, that pictures like these would be used to convince a client about a specific design proposal, simply because they do not depict a design and are not instrumental. For that reason, the pictures are more akin to what James Corner (1992) calls ‘speculative’ as they trigger imagination rather than instruct. Digital picture production may not pass as a drawing activity in the sense of making marks on a paper (Hill 2006), however, acknowledging the creative elements of producing a digital picture does not sound too unfamiliar with a “highly imaginative and speculative activity, entailing both spontaneity and reflection” (Corner 1992:265), suggesting there is a creative element in the rendering of digital pictures. Therefore, it would be interesting to investigate how such a process can be incorporated in a design context.

So what do the results imply for visualizations within landscape architecture? Even though landscape architecture is an image-oriented profession, it is easy to uncritically

cally use pictures as part of argumentation. Although landscape architects are trained to judge pictures and through experience can understand them as projections of a 3D world, others may not interpret a landscape representation the same way. What I would like to bring to the table here, then, is that within a discourse and culture of landscape representation and visualization, where pictures are becoming increasingly 'real' looking (if using a term deriving from the term 'realism') (Kullman 2014; Kingery-Page & Hahn 2012), it is our responsibility as landscape architects to acknowledge the context, intention and content of landscape representations and not (unintentionally) mislead with the use of imagery. If becoming more aware of the discrepancy between a picture and a real landscape experience (Corner 1992), perhaps one can develop a more critical approach towards how landscapes are represented in pictures with regards to misinterpretations between a still image and an experience, as demonstrated in figure 7, 8 and 15.

#### 5.4. Theory help verbalise experience

With regards to the delimitation on visual perception the framework was helpful in order to understand the material gathered during fieldwork. It helped me to describe what we perceived (appearance), in what way we perceived it (activity) and how we responded to what we perceived (response). The activity parameter of the experiences was rather restricted to the focus of visual aesthetic experiences, as it mostly involved the activity of walking or standing while looking or gazing. If widening the scope of the thesis to involve all senses, a richer description of the activity parameter can be made. At the same time, that flaw only emphasizes that aesthetic experiences involves perception through all senses, and not just the visual.

#### 5.5. Methodological reflections

Conducting fieldwork to "collect" visual aesthetic experiences allowed me to directly record experiences as they happened.

Looking at the results from the fieldwork it is apparent that there was a focus on built structure rather than landscape elements. The weather (cloudy, cold), the season (winter) as well as the kind of site (urban landscape) factored into the focus on built structure as opposed to the "greener" and less hardscaped areas of Kvarnholmen. The delimitation to visual aesthetic experiences likely factored into a focus on views and outlooks, but can also, through another lens, be understood as examples of how the Picturesque aesthetic is present in contemporary landscapes and former industrial sites (Herrington 2006), as built structures belonging to shut down industries, such as the silos and the brick buildings in Kvarnholmen in this case, evoke associations for the experiencing person (ibid. 2006).

As landscape architecture students we are trained to conduct fieldwork with the material provided, but we also carry a similar bias with a common interest in architecture. I consider the latter a strength in this case as we were able to discuss with reference to other projects which enabled a rich discussion on what we experienced on Kvarnholmen. It can be argued that such a choice perhaps exclude the perspectives of residents and make the empirical material unrepresentative. However, as the experiences were not to be critically evaluated, it did not jeopardize the purpose of the fieldwork which purpose was to collect experiences of any kind.

A combination of a fieldwork and an in depth interview afterwards may be a good idea for similar task in the future. I chose to include participants in the field study in order to nuance and enrich the empirical material. In addition, their contribution to making things visible by commenting and openly discussing what they experienced was invaluable for the exercise. For future studies it can be interesting using other material to express what someone experience in the moment, other than through the conversation. In that regards, I suppose this method can be seen as a pilot in understanding others landscape

experiences as well as your own.

Conducting an arts-based method helped me to see technical issues with translating an experience in a picture. For example, I found it valuable and creative to source visual material together with an AI as it gave me an opportunity to "direct" what kind of images I was looking for while also having the right to use, modify and even distribute the material, without asking anyone for consent. The technique, however, has not been accessible very long and I am aware that the way I used it likely is not the most effective nor best way. I think this method encouraged experimentation and exploration for what is possible as I did not set up too many restrictions on how to create a picture. It should, however, be acknowledged that my (lack of) skills and personal biases are obvious determinations and restricting factors for how successfully an experience is depicted. I can see that an alternative approach to find supplementary answers is to speak to professionals that work with visualization and landscape representation. Another angle for a similar exercise could be to experiment with other equipment and media, such as painting, sculpture, modelling or poetry and investigate mediums beyond the digital realm.

#### 5.6. Conclusive statement

The examples of how visual aesthetic experiences one has in a landscape can be depicted in a picture are as emphasized, merely examples, and the implications of creating them with regards to the experience of origin are multiple. Depicting an appearance of a landscape may be done as a view, while actions, motion and responses are challenging parameters of a landscape experience to depict in a still picture.

Although the results are suggesting that the two dimensional still picture is rather limited in its ability to express a landscape experience from a corporeal landscape, it is not too much of an issue in the context of landscape architecture as long as pictures are used in a transparent way where their

intention is explicitly described. In the future when I find myself studying representations of a landscape, I will remind myself of how easily certain elements get lost in translation with respect to lived experiences.

## 6.0. References

---

ArkDes Think Tank (2021). Livskvalitet i tid och rum - En uppföljning av Politik för gestaltad livsmiljö 2021 och medskick inför framtida arbete. arkdes-thinktänk-rapport-2021-68s.pdf [2023-03-08]

Berleant, A. (2013). What is Aesthetic Engagement?. *Contemporary aesthetics*. 11, 5. "What Aesthetic Engagement?" by Arnold Berleant (risc.edu)

Berleant, A. (1984). Aesthetic Participation and the Urban Environment. *Urban Resources*. 1(4), 37-42.

Boverket (2022). Politik för gestaltad livsmiljö. Politik för gestaltad livsmiljö - Boverket [2023-03-08]

Cambridge Dictionary (u.å.). Drawing. DRAWING | English meaning - Cambridge Dictionary [2023-03-06]

Corner, J. (1992). Representation and drawing: Drawing and making in the landscape medium. *Word & Image*. 8(3), 243-275.

Council of Europe Landscape Convention (2000). ETS No. 176. CETS 176 - European Landscape Convention (coe.int) [2023-04-03]

Dewey, J. (1934). *Art as Experience*. First edition, New York: TarcherPerigee

Dümpelmann, S. (2022). Walking, drawing, designing. Fredrich Ludwig von Sckell's drawing stick and eighteenth-century landscape gardens. *Ri-Vista. Research for Landscape Architecture*, 20(1), 100-111.

Greenwood, J. (2019). Arts-Based Research. *Oxford Research Encyclopedia of Education*. <https://doi.org/10.1093/acrefore/9780190264093.013.29> [2023-02-07]

Herrington, S. (2006). Framed Again: The Picturesque Aesthetics of Contemporary Landscapes. *Landscape journal*. 25(1), 22-37.

Herrington, S. (2016). Beauty: past and future. *Landscape research*. 41(4), 441-449.

Hill, J. (2006). Drawing research. *The Journal of Architecture*. 11(3), 329-333.

Kabir, K.H. (2012). Why is drawing important to research? *Journal of Landscape Architecture*. 7(1), 34-45.

- Kingery-Page, K. & Hahn, H. (2012). The aesthetics of digital representation: realism, abstraction and kitsch. *Journal of Landscape Architecture*. 7(2), 68-75.
- Klein, H. (2022). De får ekonomiskt stöd. <https://www.slu.se/ew-nyheter/2022/4/de-far-ekonomiskt-stod/> [2023-01-24]
- Kullman, K. (2014). Hyper-realism and loose-reality: the limitations of digital realism and alternative principles in landscape design visualization. *Journal of Landscape Architecture*. 9(3), 20-31.
- Kvarnholmen utveckling AB (u.å.). *Upptäck Kvarnholmen*. <https://kvarnholmen.com/upptack/> [2023-05-08]
- Lenzholzer, S., Duchhart, I., Koh, J. (2013). 'Research through designing' in landscape architecture. *Landscape and Urban Planning*. 113(0), 120-127.
- Meyer, E.K. (2008). Sustaining beauty. The performance of appearance: a design manifesto in three parts. *Journal of Landscape Architecture*. 3(1), 6-23.
- Meyer, E.K. (2015). Beyond "Sustaining Beauty": Musings on a Manifesto. I: Deming, E.M. (red.) *Values in landscape architecture and environmental design: Finding center in theory and practice*. Baton Rouge: Louisiana State University Press. 30-53.
- OpenAI (2022). *Content policy*. <https://labs.openai.com/policies/content-policy> [2023-05-08]
- Peacocke, A. (2023). Aesthetic Experience. *The Stanford Encyclopedia of Philosophy* (Spring 2023 edition). Edward N. Zalta & Uri Nodelman (eds.), forthcoming URL = <<https://plato.stanford.edu/archives/spr2023/entries/aesthetic-experience/>>
- Shelley, J. (2022). The Concept of the Aesthetic. *The Stanford Encyclopedia of Philosophy* (Spring 2022 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/spr2022/entries/aesthetic-concept/>>
- Stefano, D. (2020). Representation and Landscape Architecture: Towards a New Language? The semiotic and cognitive value of representation as a relevant issue for an aware and evolving culture of landscape architecture. *Ri-Vista. Research for Landscape Architecture*. 18(2), 40-49.
- Thompson, I.H. (2006). The Picturesque as Pejorative. *Studies in the History of Gardens & Designed Landscapes*. 26(3), 237-248.
- van Dooren, N. & Nielsen, A.B. (2019). The representation of time: addressing a theoretical flaw in landscape architecture. *Landscape research*. 44(8), 997-1013.
- van Etteger, R., Thompson, I.H., Vicenzotti, V. (2016). Aesthetic creation theory and landscape architecture. *JoLA - Journal on Landscape Architecture*. 11(1), 80-91.
- United Nations Human Settlements Programme (u.å.). *The New Urban Agenda*. The New Urban Agenda | Urban Agenda Platform [2023-03-08]



SCIENCE AND  
EDUCATION **FOR**  
**SUSTAINABLE**  
**LIFE**