

Perception as an Integral Part of the Design Process



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Master's thesis 2013

Fashion and Clothing Design

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1 INTRODUCTION

There is a quote by the British writer Aldous Huxley which has been haunting me ever since I first read it. It goes as follows:

'THERE ARE THINGS KNOWN AND THERE ARE THINGS UNKNOWN, AND IN BETWEEN ARE THE DOORS OF PERCEPTION.'

Though a result of Huxley's LSD-infused psychedelic experiments, this particular quote ingeniously summarises his thoughts on perception. It states that reality is something universal and true, but that the way we interpret reality is highly subjective, hence unknown and unpredictable.

Huxley's quotation caught my eye because I have in my work as a fashion and clothing designer always been balancing reality with imaginary through the search of surreal colours, organic shapes and subtle textures. My knowledge and study of perception has, however, previously been purely visual and strongly based on first hand experiences and feelings. Thus, this thesis aims to be a deeper exploration into the subject.

The thesis is divided into two parts: theoretical approach and production. The theoretical part of the thesis is mostly based on literature concerning perceptual psychology and perception in relation to art and design. In this part I discuss perception and its limitations as well as various perceptual phenomena. Design aspects are introduced through examples of fashion and textile design and art. The goal of the theoretical part is to offer information on perception and to arise essential questions that will then be discussed in the production part as well as visualised in the final designs.

Inspired by the theory I create a women's ready-to-wear mini collection that challenges the viewer by visualising the ambiguous nature of perception through bold patterns, diverse woven textiles and boisterous silhouettes. Because I am a material-based designer, the focus of the production is strongly placed on pattern and textile design. The data is implemented in the design process and discreetly perceptible in the final pieces.

Through this thesis I question the traditions and limitations of my own perception in order to strengthen my design identity and to develop my design methods. Therefore, this thesis is mostly a personal exploration on the subject of perception as a part of the design process.

2 BACKGROUND

2.1 Starting Point

I've always been drawn to the ambiguity of perception and the effects that this in its turn has on our perception of reality. How would I perceive colours if I had not been taught that the sky is blue and the grass is green? What would I perceive encountering the sea for the first time? Would I close my eyes to hear the surge of waves and smell the seaweed; look far to the horizon to see where the water meets the infinite blue; or race to the waterline to feel the waves crashing on me? How do my previous experiences affect my perception?

According to Rudolf Arnheim, professor emeritus of psychology of art in Harvard, perception determines the way we view the world and even shapes the way we think. Without perception there are no cognitive processes. Moreover, when deprived of stimulus the brain relies solely on memories and starts creating imaginary that can even develop into hallucinations - just to produce something to perceive and think about. (ARNHEIM 1969, PP.18-19) If perception is such an integral part of the cognitive process, it must be a topic worth studying also in the field of art and design.

I chose the subject of perception as my thesis topic because I am immensely fascinated by the selectivity of perception and infatuated with the idea of perceiving the world in a more focused and in-depth manner. Moreover, the topic of reality versus imaginary has captivated me throughout my fashion and clothing design studies, and my design aesthetic has always been driven by surreal imagery and a dreamlike mood. Because of this and since I've been mesmerised by the concept of perception for such a long time, it felt natural that I finally educate myself properly on the topic.

On a professional level, I was drawn to the subject of perception due to its complexity. In other words, I truly want to challenge myself with this thesis. The fact that I've never studied even the basics of psychology, let alone perceptual psychology, both scares and intrigues me. Furthermore, I find the idea of finding inspiration for fashion and textile from a somewhat unorthodox source highly interesting and contemporary.

Additionally, I chose perception as my thesis topic because I think that in fashion and clothing design there is not enough valuable cross-disciplinary discussion. I also felt very strongly about the topic of perception in the context of my own work, because fundamentally perception dictates the way we experience the world: art, design, fashion, everything. I think that understanding perception is an essential part of understanding the whole design process. Furthermore, knowing the basic principles of perception and perceptual

My previous collections depict a surreal and dreamy mood.

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phenomena can help a designer progress in their work, because understanding the perceptual process and its limitations may help one question and develop one's own perception and design methods.

In my previous collections the research for my design work has been solely visual and abstract to the point that even I have had trouble understanding and tracing my inspirations. With this thesis I seize the opportunity to challenge myself by working in a completely different manner with starting the research process with literature instead of visual material. This also forces me to consider my design process as well as helps me explain it to others. Therefore, this thesis aims to bring perceptual insight for people working in all fields of art and design.

Moreover, the topic of perception appeals to me because though vastly discussed in psychology and philosophy as well as occasionally in art, it has been utterly disregarded in the field of fashion and textile design. I searched for similar theses in Optika, the online thesis database of Aalto University, as well as in Theseus, the thesis database of Finnish universities of applied sciences, and found a number of theses focusing on the physical side of perception, meaning optical illusions and vision defects as a basis for design, but only a few theses dealing with the general topic of perception and perceptual psychology.

The thesis that correlates the best with my own thoughts is written by Elina Bäckman, majoring in Art from Tampere University of Applied Sciences in 2007. In her thesis Bäckman explores the contradiction of visual perception and objective knowledge through her installation called Di-Optri. Bäckman's thesis is a study of perception and reality as a result of vision, cognitive processes and the brain. My thesis also discusses the relationship between the physical and the perceptual world, but my approach is more design based and perhaps less conceptual than Bäckman's.

2.2 Goals

The goal of my thesis is to design and produce a collection of garments and textiles that is inspired by various perceptual phenomena. The idea is that the theoretical grounding offers a basis and guide lines for the whole design process and is subtly visible in the final pieces. Ultimately, my goal is to create garments that are visually challenging and tactically exhilarating while still remaining wearable and lighthearted.

My thesis aims to answer the following research questions: How does perception affect my design work? How can I, as a designer, challenge my per-

ception? How does context affect perception? How can the tactical sense be incorporated in fashion and textile design?

The purpose of these questions is to make me actively question my perception of reality and to challenge my usual design methods as well as create a clothing collection that is surreal and unexpected of me. These questions along with many others will be answered in the production part of this thesis and visualised in the final collection of garments and textiles.

2.3 Theoretical Approach and Data

The theoretical part of my thesis is focused mostly on visual perception; however, the tactical sense is also covered in one chapter. The theoretical part takes an empirical approach on perception and is based mostly on books about perceptual psychology and perception in the context of art. The topic of perception is explored from a fashion and textile design point of view. The design aspect is introduced mainly through my own design process as well as through examples of the works of other fashion designers.

My own sense of perception also plays an active role as a research tool in this thesis, since I am constantly perceiving and analysing my own surroundings. During this design process I have questioned my perception relentlessly and focused on trying to perceive everything in a more in-depth manner. In reality, this simply means closing my eyes while choosing fabrics to take full advantage of my tactical sense, zooming in on a part of a sleeve and scaling it to unimaginable proportions while sketching or squinting my eyes while designing a print and noticing an interesting blur effect in the corner of my visual field.

Keywords during my research process include the following: *PERCEPTUAL PSYCHOLOGY, CONTEXT OF STIMULUS, ACTIVE TOUCH, REALITY VS. IMAGINARY, DISSONANCE, PERCEPTUAL SELECTIVITY, SIZE PERCEPTION, TEXTILE FOR FASHION, PATTERN, SYMMETRY* and *COLOUR PERCEPTION*.

2.4 Structure of the Thesis

This thesis is roughly divided into two parts: the first half of the text is concentrated on the theories of perception and the second on the design process. However, the two constantly overlap each other since the data inspires, guides and supports the design process and the design visualises the gathered data. In a sense, the theory and production are engaged in a continuing dialogue with each other.

The first half of the thesis starts by explaining the very basics of perception. Through examples the thesis then continues to perceptual phenomena, such as perceptual selectivity, motivation and symmetry, followed by the tactical sense in perception. The theoretical section concludes with my analysis of the research. The main goal of the theoretical part is to ask questions that will be discussed further in the production part and answered visually through the final designs.

The second half of the thesis is dedicated to the design process and production. Here the gathered data is implemented and discussed through the designs. In the production section I talk about the design process and methods and explain and justify the colour, shape and material choices of the collection. The main focus of the design process is on textile design, because it is an imperative part of my work.

The second half is followed by the results, where the final collection of garments and textiles is presented and the results of this thesis are discussed. The aim of the results is to visualise and clarify my observations of the data. The thesis concludes with self-evaluation and a discussion about the process.

2.5 Process

Inspired by the theory and by first hand experiences I designed and produced materials and garments for a small women's wear clothing collection consisting of nine looks. By materials I mean three woven textiles and multiple screen and digitally printed fabrics as well as all bonded textiles. The gathered data of the thesis is implemented in the shapes, textures and colours as well as the patterns of the collection. The collection mostly consists of separates, which are easy to mix and match. This makes the collection completely wearable, hugely versatile and even somewhat commercial however surreal and dream-like it may seem at first glance.

The initial idea for the topic of my thesis came to me already in the fall of 2012, but the thesis process was interrupted by an internship abroad. Thus, I only truly started working with the thesis in December 2012, gathering initial reference literature and sketching. In the beginning of 2013 I read books, gathered data and made patterns for the garments. By March the design process had sucked me in completely, hence the written part of the thesis was postponed to the summer of 2013. For me creating the collection before the text felt natural, because I found it easier to concentrate on the writing once I had some distance from the collection.

In May 2013 a part of the collection was presented in the annual spring

fashion show of the Fashion and Clothing department of Aalto University School of Arts, Design and Architecture. The show was attended by international media and as a result some of my garments have been featured in online magazines, style blogs and, for example, the Finnish edition of Elle. In autumn 2013, the collection was photographed by Helsinki-based photographer Sanna Lehto. The layout for this thesis was done by Helsinki-based graphic designer Antton Nuotio.

The thesis process was guided by my supervisors Tuomas Laitinen, lecturer in the degree programme of Fashion and Clothing Design, and Kirsi Niinimäki, doctor of Arts in the Department of Design. During the thesis process I also got assistance from the studio personnel of Aalto University, including Reetta Myllymäki, Sari Kivioja and Eeva Heikkinen, as well as from Maija Fagerlund, lecturer in the degree programme of Textile Design.

The following chapters constitute the theoretical basis of my thesis. This section is divided into four main categories and multiple smaller entities that deal with perception from various angles. The reference literature mostly consists of books dealing with perceptual psychology and perception as a basis for art and design. The goal of the following chapters is to gain knowledge on perceptual psychology and phenomena, to question perception and to ask research questions that will later be answered in the production section of this thesis.

The theory starts with an introduction to the basics of perceptual psychology (chapter 3.1) and is followed by a more simplified explanation of the perceptual process in chapter 3.1.1, where the perceptual process is discussed as a pattern making process. The first part of the theory is concluded with a chapter focused on the ambiguity of the perception of reality.

Having no prior knowledge of psychology, it is imperative for me to go through the basics of perception before diving into the more detailed perceptual phenomena related to the production part of this thesis. Therefore, the goal of the first chapters is to cover and understand the fundamentals of perception before rushing into the specifics of the topic.

In chapters 3.2 to 3.2.6 the thesis takes a slightly more practical approach as it introduces a selective array of perceptual phenomena, such as perceptual selectivity, motivation, orientation, size perception and symmetry, all related to the production part of this thesis. While chapters 3.1 to 3.2.6 mostly deal with visual perception, chapter 3.3 focuses solely on the perceptual qualities of the tactical sense. This section of the thesis concludes with the final chapter that consists of my thoughts on the gathered data and integrating perceptual phenomena into my design work.

3.1 Perception

Firstly, I must address some semantics involving this thesis. By definition perception is '1 THE ABILITY TO SEE, HEAR, OR BECOME AWARE OF SOMETHING THROUGH THE SENSES' OR '2 THE WAY IN WHICH SOMETHING IS REGARDED, UNDERSTOOD, OR INTERPRETED' (OXFORD DICTIONARY N.D.). In the context of this thesis, the latter description is more suitable than the first one. When the word perception is used in this thesis, it is considered to be a part of many cognitive processes, making perception more than just the registration of stimuli. In the following chapters perception is not a synonym for seeing, hearing or feeling, but more a synonym for understanding, interpreting and regarding.

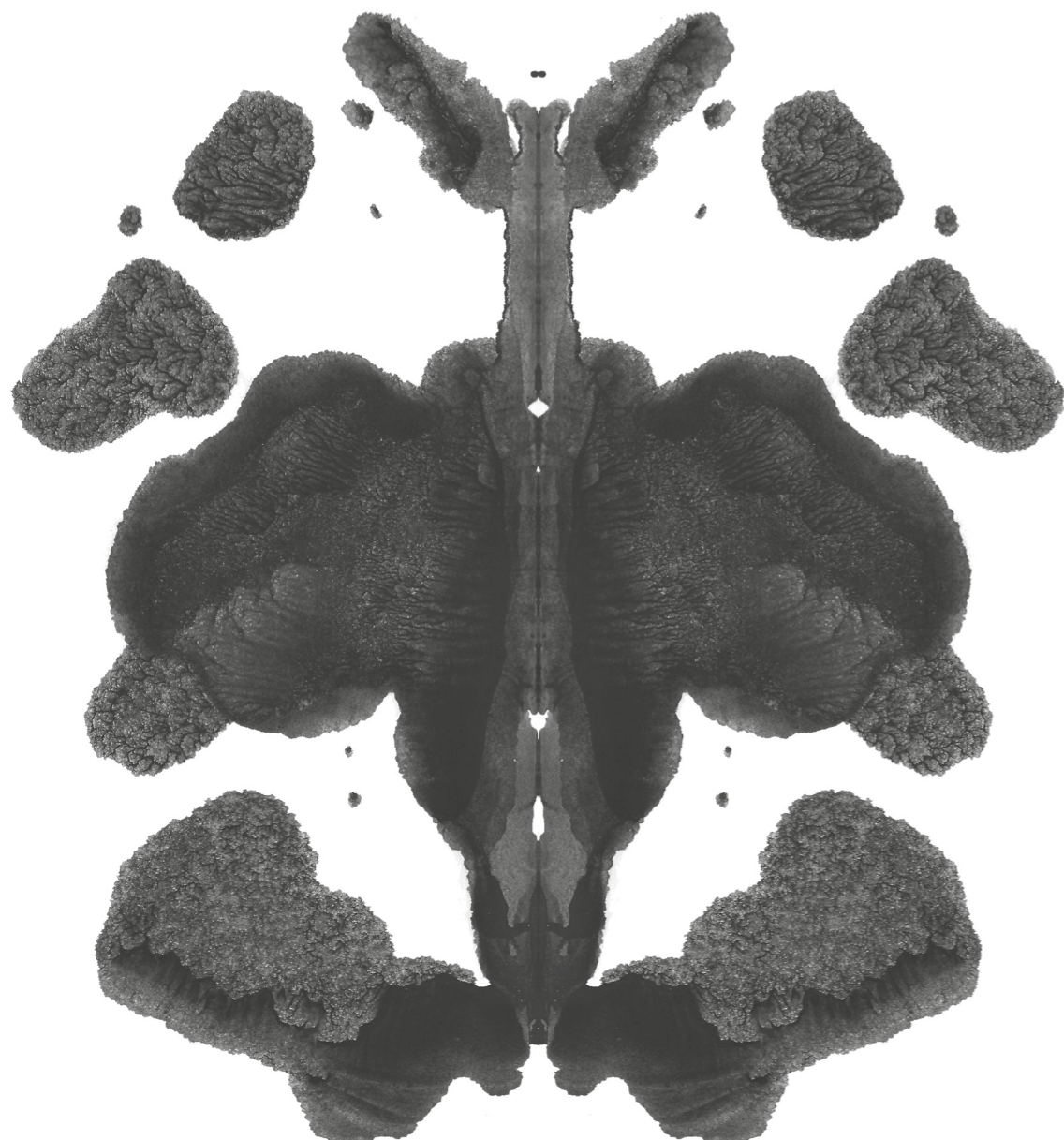
In his book *THE LANGUAGE OF VISUAL ART - PERCEPTION AS A BASIS FOR DESIGN* (1989) Jack Frederick Myers, former professor of art in the University of Dayton, explains the basic functions of perception. According to Myers perception, at its most primal form, operates in a survival mode. The goal of this primal awareness is simply to obtain data from sensory inputs and to react instantaneously according to the stimulus. Generally, this means either to feed, flee, fight or reproduce. At this basic level, perceptual responses are most likely influenced by genetic memory created by natural selection over millennia. These kinds of perceptual responses entail rudimentary emotions such as fear, pain, anger and love. (MYERS 1989, P.19) Hence, they can be considered universal and somewhat predictable.

More insight on the genetics of perception is offered by Ph.D. and author Carolyn M. Bloomer. In her book *PRINCIPLES OF VISUAL PERCEPTION* (1976) Bloomer explains that perception is programmed to be different in different species, and that the most rudimentary goal of perception in each species is to work sufficiently in order to help reproduction and survival. This means that different species perceive the world extremely differently, but always according to their own basic biological needs. (BLOOMER 1976, P.18)

At the other end of the spectrum, however, perception also acts as a part of cognitive processes that require higher level thought processes to interpret sensory inputs. At this higher level, perception is influenced not only by biological structure and the stimulus itself but also by the perceiver's experience, beliefs, values, knowledge, mood, age, health, habituation and so forth. Consequently, these factors that are separate from the stimulus itself give perception its characteristically unpredictable nature. As a result, perceptions can sometimes vary drastically between different people. (BLOOMER 1976, PP.17-18)

Myers (1989) also emphasises that perception is an active and ongoing process of constantly gathering data with all our senses and comparing it to paradigms of prior experience. Our perceptions are always a sum of things we are not actively aware of and hugely influenced by preconceived notions and experiences. Furthermore, perception is not objective nor does it work like a camera reproducing one true and exact image of the world. Instead, the perceptual process is highly subjective and inclined to very unique and different interpretations due to the random and unpredictable nature of our life experiences. (MYERS 1989, P.9)

Ian E. Gordon (1990, PP.124-131) agrees with Myers and argues that the core idea of empirical theory of perception is that perception consists of not only one's registration of sensations but also one's interpretation of the stimuli in question. In short this means that no matter what one sees, hears, smells, senses or tastes, perception is always affected by, for example, previous



experiences, the context of the stimuli and motivation.

Considering this, it is possible to say that no one can ever truly experience reality objectively, as it factually exists. Moreover, no one can ever experience reality the same way as I do. Even my way of perceiving the world is likely to change and evolve over time and through coincidental experiences. This apparent randomness of perception is what makes it a captivating topic to study.

The concept of subjectivity of perception is also supported by numerous studies, for example, dealing with perception and ambiguity, the most famous being the Rorschach inkblot test. The results of the test have shown that what is perceived, when one is confronted by ambiguous imagery, reveals more about mental processes than about the actual stimulus in question (BLOOMER 1976, P.11). The mind tends to seek meaning in places where it does not exist; to see figurative shapes in ambiguity; to hear familiar words in a foreign language.

Myers' (1989) thoughts conclude that perception is a part of everything we do. This thought is supported by the theories of Arnheim (1969) that argue that perception is a vital part of the cognitive processes. Ultimately, perception tells us if that church bell chiming is worth listening to or not; what meaning we deduce from the sound; and how we react to it. Does it invite us in or drive us away?

3.1.1 Perception as a Pattern Making Process

The previous chapter identified the concept of perception and the cognitive processes behind it. However, talking purely from a visual point of view, perception can also be considered as a rather simple process of pattern making and recognition. This chapter explains the concept of pattern and perceptual pattern making according to Myers (1989), who was already referred to in the previous chapter. Myers' uncomplicated pattern making analog of the perceptual process makes perception more comprehensible also for people without any prior knowledge of perceptual psychology.

Myers (1989) suggests that perception can be seen as a pattern making process that consists of two basic functions: 1) ORGANISATION AND 2) RECOGNITION. The goal of organisation is to separate a figure from ground. In this case, ground means a neutral background area from which the figure can be detached. (MYERS 1989, P.11) It must, however, be added that in this context, 'neutral ground' does not mean that the ground in question is plain or mundane in reality, but rather that it is transformed into that by our perception when we focus on a single detail of a whole.

The figure and ground are separated from each other by an edge and what creates this edge is change. Change, in turn, means any alteration in the visual field. (MYERS 1989, P.11) A change can, for instance, be a black dot in the middle of an otherwise white paper, a plant pushing through a flat concrete floor or something as subtle as a freckle among other imperfections of the skin.

When perception detects a change, all its focus is placed on that particular figure as it begins to test it to find a match for it from the vast amounts of preconceived models or paradigms in our minds. When a suitable paradigm has been found, the figure is recognised. It is a simple process of discrimination. (MYERS 1989, PP.13-17)

Lets take a moment to study a violet as an example of Myers' analog. When you first see the violet, your brain most likely quickly dismisses all associations with man-made objects, such as buildings, cars and other machinery, and imminently places the violet in the nature section of your paradigm library. The brain then races to place the flower in the correct subcategory of flora as opposed to fauna or fungi. Then it compares the violet to all the flowers and plants in your archive of paradigms until it finally reaches the correct one: a violet. This is where the pattern making process ends and where the more cognitive side of perception begins. After the initial recognition of the flower, the mind then continues to search through prior encounters with the same flower to see what it means to you on a psychological level. Maybe a violet was given to you by your first love or perhaps you collected it in a herbarium as a child. This final process is what ultimately determines how you perceive the flower.

To sum up, a pattern is a visual component, and visual perception is a process of pattern making by organising and understanding patterns from what we see around us. These achieved patterns are compared to paradigms that are somehow similar to the received stimulus. To find the correct paradigm, the perceptual process has to go through visual material it has gathered throughout life to compare it to the current visual stimulus. (MYERS 1989, P.19) These 'reference libraries' of paradigms vary greatly from person to person, because everyone has their own unique reference points that dictate the way they perceive the world.

The notion that prior experiences affect perception in such a great way made me want to question and alter my reference points. How would I perceive a violet seeing it for the first time? What kind of associations would I make? Is a violet inherently fragile and feminine or can it also appear powerful and bold if placed in the right context? I decided to start building an alternative paradigm library of my own by questioning my percepts and by dismissing preconceived notions and inherent stereotypical interpretations.

3.1.2 The Paradox of Reality

We experience illusions daily without even realising it. Our perception is limited, which causes it to make assumptions and faulty percepts that may be unrelated to the reality of the stimulus. Moreover, we perceive these everyday illusions to be real without even questioning them. This does not mean that reality and illusions, the physical and the perceptual world, can not coexist - quite the contrary! They are both existing and both equally as real. (MYERS 1989, P.10)

The coexistence of reality and illusions is in itself proof that there is no such thing as one absolute truth in the context of perception, with the exception of the basic primary level of perception as already discussed in chapter 3.1. Our perception has numerous ways of tricking us, whether it is by dismissing certain sensory information or making perceptual compromises based on prior experience.

Furthermore, this symbiosis of reality and imaginary is what makes perception subjective. For a designer realising the subjectivity of perception can be an eye-opening revelation, because it can help one question one's own perception and ideas of reality, thus broadening one's way of experiencing the world. By actively questioning perception, one might also be able to detect weaknesses as well as strengths in one's own designs.

Once I realised that there is no right or wrong in the context of reality and that instead my perception is just a reflection of my mental state, prior experiences, memories and knowledge, I started to question my everyday perceptions and to analyse them. The process of questioning reality is a rather tedious one, since it requires the perceiver to stop and to dismiss perceptual assumptions by trying to take the stimulus out of context and perceive it with a mind free of preconceived notions.

Furthermore, questioning reality brought interesting aspects into my design process, because it encouraged me to also question and develop my design methods. Moreover, it raised a mountain of research questions. How do my designs appear to others? How could I develop my vague and sensitive design aesthetic to be bolder, without losing the essence of my designs? How can I, as a designer, create something that is real, yet seemingly surreal and otherworldly?

The particular perceptual phenomenon that helped me understand and question my perception are discussed further in the following chapters 3.2 to 3.3 and the practicalities of the contesting design process are elaborated in the production section of this thesis.

3.2 Perceptual Phenomena

The previous chapters aimed to give a short introduction of perceptual psychology for the reader to understand what perception is and how the perceptual process operates. In contrast, the following chapters 3.2.1 to 3.2.6 focus more on specific phenomena of perception (while still approaching the topic from a psychological point of view), thus offering a more practical approach to perception.

3.2.1 Perceptual Selectivity

Perceptual selectivity refers to the ability to focus on certain stimuli, for example, someone calling your name on a crowded street, and to ignore less meaningful stimuli, like the sound of surrounding traffic. When the mind encounters too many external stimuli, it simply tunes out some of them and "pretends" they do not exist to avoid perceptual overload. Though you are most likely not aware of it, your brain is constantly valuing stimuli as meaningful and of less importance. (BLOOMER 1976, P.13)

Though playing a crucial role in our everyday life in helping us avoid sensory overload, perceptual selectivity also has some unwanted discriminative aspects. In fact, our perception can often be so selective that it tends to focus only on the things we expect to see, while dismissing the things that are unexpected (MYERS 1989, P17). This in turn makes us have preconceived notions about sensory stimuli and enables us to perceive things as they really are.

Obviously, perceptual selectivity is always present in the design process. According to my own experience as a designer, I have noticed that often the most successful designers actively question their own aesthetics in order to learn and to develop as designers. In contrast, I used to design only according to my own perception. Moreover, my perception was focused only on things that responded positively with me and I created work that was customised for my own aesthetics.

While, as a designer, finding your own style and cultivating your particular strengths is of course essential and imperative, questioning your perception to develop as a designer should be equally as important. This should be remembered especially with the phenomenon of perceptual selectivity, because it is such a basic function of perception, yet not many are aware of the negative effects of it.

In this thesis I used perceptual selectivity as a design tool, utilising the discriminative qualities of it. I consciously forced my perception to dismiss

Examples of past sleeve designs compared to the ones of this thesis collection.

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some familiar aspects of design and instead encouraged it to focus deeply on the things I previously disregarded. In this thesis and in the context of garments this, for instance, means placing most of my attention to sleeve designs, since the sleeve is a part of the garment that I had understated before. More aspects of perceptual selectivity in the context of my designs are discussed in the production section of this thesis.

3.2.2 Dissonance

Dissonance happens when two or more perceptions appear to be in conflict with each other (BLOOMER 1976, P.14). A clear example of dissonance is seeing a cat that barks. When the visual and auditory do not correlate with each other the perceiver is left feeling perplexed and confused, yet strangely fascinated.

Perceptual dissonance often makes people feel uncomfortable, because it offers little closure to the perceiver. If the dissonance is great enough and no closure is received, the perceiver might try to reject the stimulus altogether to avoid feeling frustrated and puzzled. Then again, if closure is too easy, the stimulus does not hold the perceivers attention after the initial attraction has faded. (BLOOMER 1976, P.14)

As a result, it can be said that a well planned and moderate amount of dissonance can make even a simple design more appealing, complex and unexpected, whereas too much dissonance will just leave the perceiver confused and disappointed. I wonder how perceptual dissonance could be utilised in garments and textiles. Is it possible to make a hard and graphic pattern appear soft and feminine or to make heavy materials seem light and gravity-defying?

3.2.3 Motivation and Complexity

In her book titled *PERCEPTION* (1983), Professor of Psychology Margaret W. Matlin provides a comprehensive overview on perception and its multiple aspects. In chapter 13 Matlin (1983, P.287) emphasises the role of motivation in perception, stating that because motivation consists of our desires and needs, it greatly affects the way we experience and perceive things.

Lets say a person loves violets. They love violets so much that they notice them everywhere they look and their pupils dilate instantaneously when they spot a violet in a flower bouquet filled with dozens of other flowers. Not only that, but to them the violet also appears larger and heavier than the dahlia next to it and they can even see violets in completely ambiguous surfaces such

as in the structure of a random wall or in cloud formations in the sky.

An other aspect of the relationship between motivation and perception is complexity. The influence of complexity on motivation has mostly been researched in aesthetics, and the key finding in this research has been the importance of desired complexity of the received stimulus. In the case of a simple dislike-like scale, people tend to prefer intermediate levels of complexity. Then again, the more time people spend with the stimulus, the more complex they like it to be to avoid boredom. (MATLIN 1983, P.306) Complexity affects the motivational state of the perceiver by making them intrigued to perceive more of the stimulus.

Motivation and complexity driven behaviour is detected already in infants, who often tend to prefer looking at patterned cards rather than plain ones. Moreover, they prefer complex patterns to simple ones and spheres catch their attention more than flat circles. (MATLIN 1983, P.13)

The perceptual aspects of complexity can easily be applied to fashion and clothing design. Furthermore, the same factors that make a design complex can also make it timeless and long-lasting, because the desired complexity level often correlates with the time spent with the stimulus. As a fashion and clothing designer, to me the most important factors affecting complexity of a garment include silhouette, pattern and it's placement as well as the textiles used in the garment. These main principles of complexity are applied in the production of this thesis.

3.2.3 Size, Viewpoint and Orientation

Size perception is affected by different factors such as context, surroundings and even the emotional value of the stimulus. Size perception can, for instance, be altered when an object is taken out of it's normal context and placed into an unfamiliar setting. Consequently, an object may appear smaller than normally if surrounded by open space. (BLOOMER 1976, PP.68-69)

In the context of fashion and clothing design, size is an essential factor determining the silhouette of a garment. Aspects of a garment's size include not only its fit on the body but also the volume and proportions of the garment. Whether it is the extreme exaggeration of the hips in the 18th century or the hilariously wide shoulder and sleeve constructions of the 1830s, clothing has been used to accentuate and transform the perception of the human form throughout history.

In contemporary fashion design one of the masters of exaggeration, volume and proportion is the Japanese designer Rei Kawakubo, head of the dis-

An example of Rei Kawakubo's fearless approach on size perception of garments.

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tinguished fashion label Comme des Garçons. One example of the distinct shapes and proportions of Comme des Garçons is their autumn/winter 2012-13 collection. The collection presented hugely oversized and almost cartoonish silhouettes, in which the stiff and bold pattern pieces appeared to be simply scaled upwards and stitched together by the edges (VOGUE UK 2012).

The usage of excessively stiff materials with pattern piece like shapes gives the collection an intriguing two-dimensional appearance that also alters the viewer's perception of the human form. Consequently, my goal in this thesis is to question the dimensions of the human shape and approach size, volume and proportions in a playful manner by exaggerating shapes and using unconventional proportions.

Another key factor regarding size perception is viewpoint. When you look at an object from below, its size becomes distorted and it appears larger, whereas when you see the same object from above it seems smaller to some extent. Normally when you, for instance, look up at a building, it is larger than you; and when you look down on a plant, it is smaller than you. Perception mimics and reflects experience, even though it occasionally means creating factually faulty percepts. (BLOOMER 1976, P.74)

The world is also three-dimensional, thus one seldom experiences objects only from the front and centre. As a result, object orientation plays a key role in shape perception, because to correctly identify objects one needs to see them from all angles. Accordingly, orientation brought an interesting aspect to my design work, because it made me more aware of the different angles the garments might be viewed from.

The affects of viewpoint and orientation made me think about how the viewer's perception could be challenged. I wonder if it is possible to create textiles that change appearance depending on the viewpoint. How does the viewing angle ultimately affect our perception of garments?

3.2.4 Symmetry

All humans, animals and even insects appear to have symmetrical characteristics. I use the verb "appear" here, because perfect symmetry is almost non-existent in nature. However, it is difficult for humans to detect slight differences between, for instance, the left and right halves of a person's face (MYERS 1989, PP.13-14).

Though plants have many elements of symmetry, these elements are normally noticeable only at extremely close inspection. The appearance of a dandelion with two flowers sticking out at different angles from different

heights with an odd number of variously sized leaves reaching towards the sun is considered predominantly asymmetrical. All living creatures are, on the other hand, seen as predominantly symmetrical. (MYERS 1989, PP.13-14) For instance, a dog has a pair of eyes and ears, one eye and ear on each side of its head on approximately the same height, as well as four feet, two on each side.

In ancient Greece and during the Roman empire asymmetrical drapery was the most common dress style. However, accompanied by developed tailoring techniques and the import of heavier woven fabrics, a completely different symmetrical style took over during the 12th century, dominating European clothing for over six centuries (LEVENTON 2008, P.47). The roots of symmetry run deep in the Western culture, and especially during the Renaissance symmetry was something to aim for: the form of ultimate beauty (MYERS 1989, P.15).

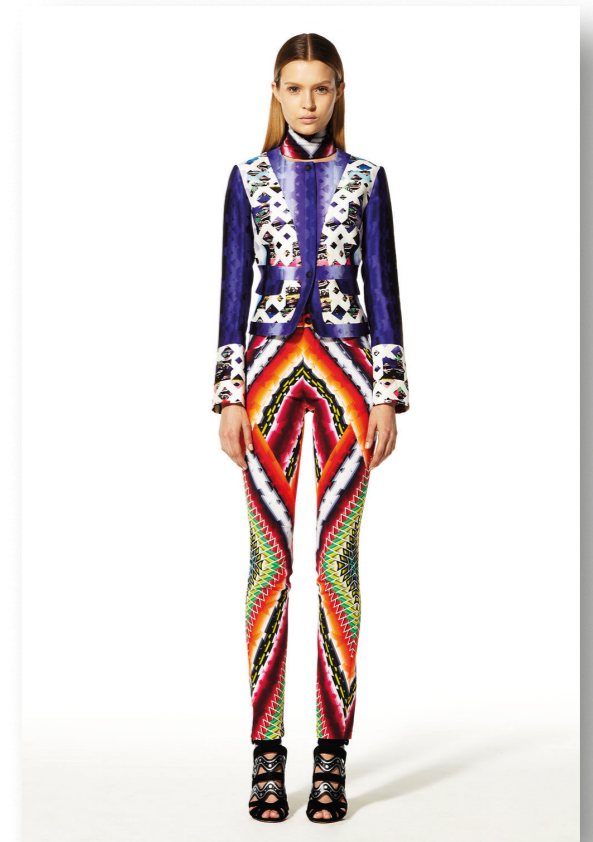
Myers suggests that our infatuation with symmetry might be closely connected to the fact that it is a common aesthetic characteristic of the human species, hence we might have an inherent inclination towards it. Simultaneously, asymmetry has been highly regarded in Oriental art throughout history since the focus relies more on nature than the human or animal form. (MYERS 1989, P.15) Nevertheless, the Orient has also influenced Western culture and by the 18th century asymmetrical aspects became accepted in Europe as a result of the rococo movement.

Though perfect symmetry is almost non-existent in nature except on a molecular level, human's often perceive things as symmetrical. However, when we are presented with mirrored images that offer a perfectly symmetrical picture of, for example, a human face, a flower or a landscape, suspicions arise and we notice that something in the picture is off. Though we might not be able to pinpoint the problem, we do perceive the image as unnatural and even somewhat disturbing.

The concept of perfect symmetry intrigues me. Not because I think symmetry equals beauty, but because there is something eerie and strange about perfect symmetry especially in the context of nature. I wonder how the traditions of symmetry affect my design work. Does apparent symmetry automatically make garments aesthetically pleasing? How does the perception of a garment change if symmetry is unexpectedly interrupted? How can absolute symmetry be portrayed where it is seldom perceived?

An interpretation of symmetry in garments and patterns by Peter Pilotto and the asymmetry of a dress by Yohji Yamamoto.

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A picture of a mirrored landscape creates a surreal and absurd mood. The serene Como landscape becomes dreamlike and unnatural.

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3.2.5 Colour

According to Josef Albers (2006, p.1) colour is the most subjective aspect of art, because it is seldom perceived as it physically is. At the time Albers' book *INTERACTION OF COLOR* was first published in 1963, it offered radical and experimental ways of studying and teaching colour. Instead of following academic conception of 'theory and practice' it took on a more empirical approach of 'practice and theory'. Since the 1960s the book has become a bible of colour perception and Albers a world-renowned colour theorist alongside Johannes Itten.

Albers (2006, p.1) argues that the deceptive nature of colour must be recognised in order to use colour effectively. In a sense, colour is abstract and nearly always affected by its relationship with neighbouring colours and context. This view is shared also by Bloomer (1976, p.80), who states that colour perception is undoubtedly influenced by context. According to Bloomer context is a fundamental factor in colour perception, because colours are seldom presented just as they are without any neighbouring colours or tones. Therefore, the same colour can be interpreted in numerous ways depending not only on the object itself but also on its surroundings and context (BLOOMER 1976, p.81).

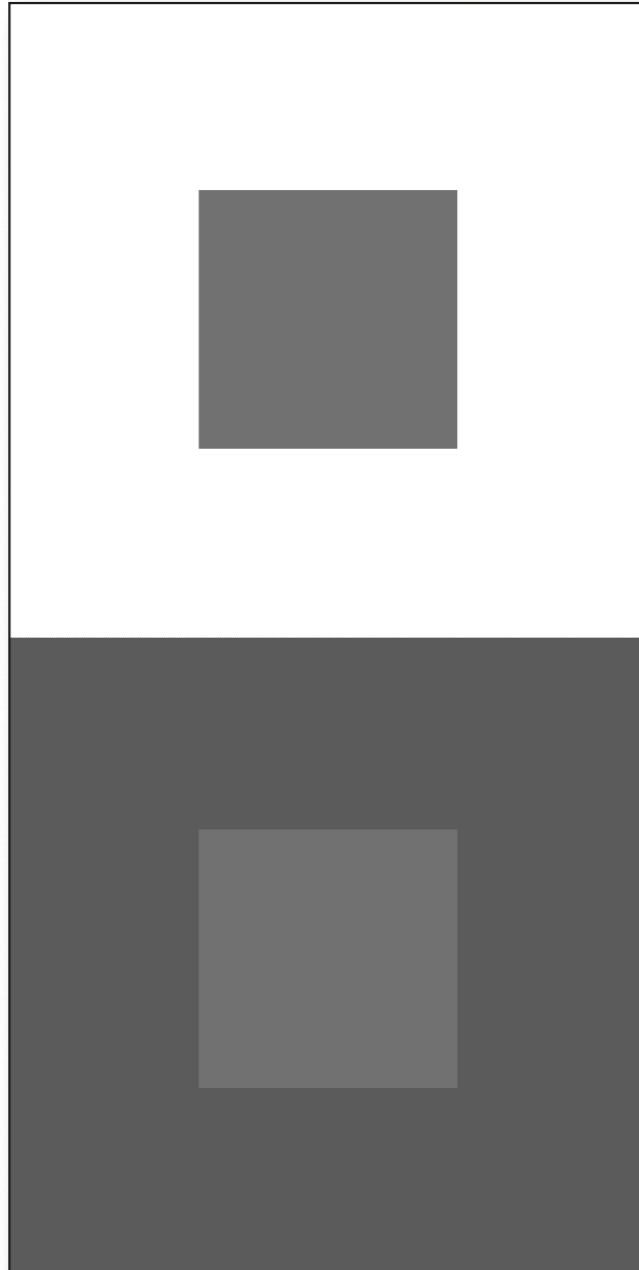
For instance, the same bluish green colour might appear completely green when presented as grass on the ground or clearly blue when presented as water in a bottle. Bloomer (1976 p.80) argues that when one sees a familiar object, one's perception often assumes it to be of a certain colour, though this particular object might have a distinctly different tone. This again shows how greatly preconceived notions affect our perception and how important it is to actively question perception, especially as a designer.

Myers (1989, pp.305-306) suggests that age also affects the way we perceive colours. According to Myers studies done in psychology propose that our colour pallet grows more refined as we age and that middle-aged people tend to prefer colours of middle luminance ranging from neutral to cool. Contrastingly, in children the preference tends to lean more towards vibrant colours such as bright red. Consequently, towards old age the preference shifts back from neutrals to more vibrant colours, perhaps due to loss of colour sensitivity. (MYERS 1989, pp.305-306)

Just like perception, colour is not absolute except at the most basic levels. Colour perception is highly subjective and open to different interpretations. However, the way of seeing colour is undoubtedly different for at least 10% of the world's population consisting of people with colour deficiency (WASSERMAN 1978, p.61). Unlike people with normal colour vision who have three standard colour-detecting cones in the retina (operating on blue, green and red wavelengths), a person with a colour defect has at least one of these

One of the most classical examples of context and colour: both of the small squares are exactly the same colour, though they are perceived to be a light or dark grey depending on the colour of the surrounding area.

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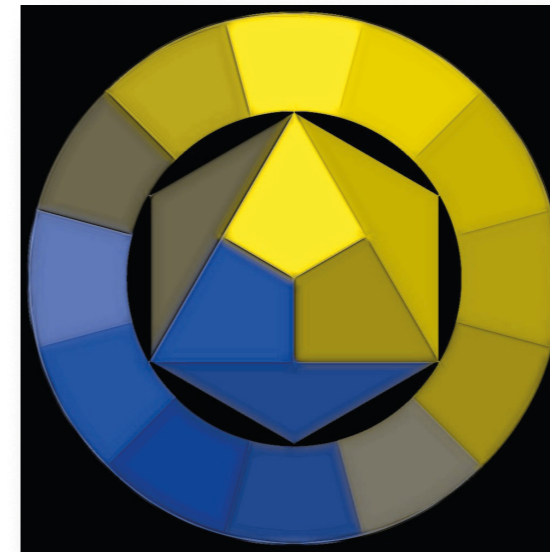


Colour wheel by Itten as seen by a person with normal colour vision (top), by a person with deuteranopia (middle) and by a person with tritanopia (bottom).

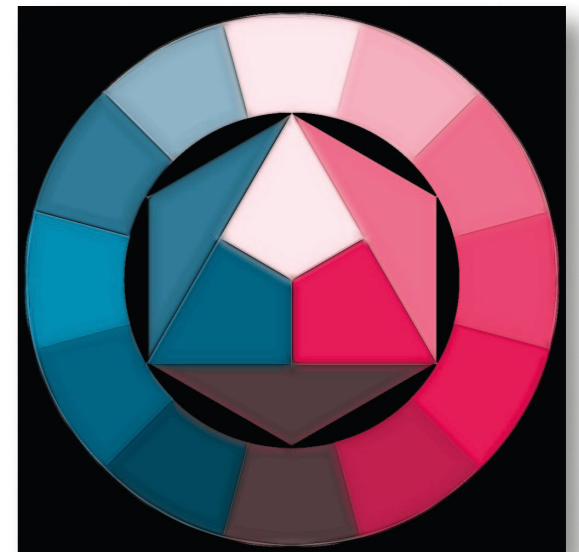
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three cones working in an abnormal way and this causes them to have difficulties in telling certain colours apart. (WASSERMAN 1978, PP.61-73)

The most common form of partial colour blindness is dichromacy and its two forms: protanopia and deutanopia, which both affect the person's ability to distinguish between reds and greens. The many other forms of colour blindness include also the extremely rare monochromacy, which causes total inability to distinguish colours from each other, and another rare form of partial colour blindness called tritanopia, which causes confusion between the colours blue and yellow. (WASSERMAN 1978, PP.61-73)

Initially I became infatuated by colour defects through an image processing program called Image J and its plugin called Vischeck. Vischeck is a colour vision simulator that simulates the vision of three forms of colour deficiency: protanopia, deutanopia and tritanopia. Vischeck changes normal colour images to different colour version of the same image at the press of just one button. During the design process, Vischeck became the key inspiration for my colour pallet and the perfect tool to help me question my colour perception.

3.3 Tactical Sense in Perception

Around two-thirds of our perceptual awareness consists of data deriving from visual sensations (MYERS 1989, P.9). Considering that we have four other senses, this seems like an awful lot of focus to place on a single sense. In the previous chapters this thesis has also focused almost solely on visual perception, thus this chapter concentrates fully on perception of the tactical sense instead.

The sense of touch can be roughly divided into two types of touch: passive and active. Passive touch means, for example, skin contact with everyday objects such as the ring on your finger or the fabric of your T-shirt against your skin. This passive adaptation to touch happens when you become accustomed to the stimulus and do not pay attention to it anymore. (MATLIN 1983, PP.204-208) In contrast, active touch means the event of actively seeking information from objects by touching them. This is also called haptic perception. Haptic perception occurs, for instance, when you take the ring off your finger, close your eyes and explore the ring's dimension and details with your fingertips to receive information. (MATLIN 1983, PP. 210-211)

As already mentioned, active touch is widely disregarded due to the importance placed on vision. Nevertheless, haptic perception is, for example, indispensable when surface structures are estimated. With active touch one can detect if a surface is, for instance, wet, slippery, soft, irregular or granular. In

the absence of vision there are many tangible variables that can be discovered solely by active touch. These include geometrical variables such as shape, dimensions and proportions; surface variables such as texture; and material variables like weight and rigidity-plasticity. (MATLIN 1983, P. 209)

As a clothing and textile designer, I place huge importance on the tactical aspects of my designs. Ingrid Loscheck, PhD and professor of fashion history, talks about the importance of tactility in garments in her book *WHEN CLOTHES BECOME FASHION: DESIGN AND INNOVATION SYSTEMS* (2009). Loscheck argues that tactility is especially important because the connection between clothing, textile and the human body is an exclusively physical one. This means that the garment and the human body are always in skin contact with each other. Therefore, clothing can be considered as a 'second skin' of sorts. (LOSHECK 2009 P.17)

According to Kruger (1970 CITED IN MATLIN 1983, P.210) the visual sense is somewhat limited, because it only focuses on the outer surface of the object, whereas the tactical sense explores the object more comprehensively, thus gaining more information of its characteristics and core. Therefore, the method of active touch should be encouraged and trained instead of purely focusing on the visual aesthetics of things.

The surface structure of a fabric plays a crucial role not only in the tactility of the garment, but also in its aesthetics. A fabric that is tactically exciting generally offers such depth or variation that the surface structure can also make the fabric visually more powerful. Additionally, tactical elements can make a garment more complex and exciting, which in return considerably affects the life span of a particular design.

Haptic perception is relevant to my thesis because, as a designer, I place huge importance on the tactical sense. In this thesis active touch is regarded especially in the shapes of the garments, varying from fitted to hilariously oversized and in the structures and textures of the fabrics, ranging from smooth and crisp to thick and hairy. Most of the garments also have a very specific shape that is easy to identify just by using the tactical sense. Furthermore, the surfaces of the textiles are not only tactically intriguing, but they also give information about the patterns on their surface.

3.4 Breaking the Limitations of Perception

In his book *HOW TO LOOK AT EVERYTHING* the acclaimed photographer David Finn (2000, P.13) proposes methods of perceiving in greater depth. Moreover, Finn detests that even the most mundane everyday objects can be perceived in a meaningful way and encourages the reader to be aware of their surroundings

and to observe things carefully and to the smallest detail. He also suggests that by training one's eyes, one might be able to notice things that others dismiss completely.

A similar view on perception is held by James Elkins in his book *HOW TO USE YOUR EYES* (2000). In the preface of the book Elkins emphasises the importance of taking time to perceive things. Furthermore, Finn and Elkins both suggest that what is important is not the subject of perception but the perceptual process itself. What kind of emotions does the stimulus awaken? Which kind of associations arise from it?

These delightfully simple thoughts of Elkins and Finn helped me throughout the design process of this thesis, alongside all the data presented in the previous chapters. Every time I got stuck in my designs, I stopped, took a step back and tried to perceive each sketch, toile, woven fabric swatch or pattern with fresh eyes to appreciate both its strengths and weaknesses. I thought about the perceptual phenomena affecting my own perception and asked myself how that particular stimulus could be perceived differently. This way I would detect something worth developing even in the most aesthetically questionable tryouts. At times I also noticed that what pleases the eye might not be tactically that exciting, and vice versa.

Understanding the perceptual process and phenomena made me more aware of the limitations of perception. This in turn made me question my perception as well as helped me immerse myself fully in perceiving my designs and inspirations better. Additionally, questioning my perception made me more aware of the traditions in my design work and helped me step out of my comfort zone of lightweight fabrics and abstract patterns, moving towards bolder shapes, figurative motifs and contrasting designs.

The theoretical approach of this thesis was clearly present throughout the design process guiding me in my design choices and pushing me towards new and uncharted waters. As mentioned already in chapter 2.1 I had only done utterly vague visual research for my collections before this thesis work. Having a research based on literature gave me something to fall back on and it helped me tremendously in the design process.

In a sense the gathered data offered me a code of conduct to work by; a framework to follow. Yet it gave me the freedom to occasionally wander off from the theoretical approach and explore the absurdity and ambiguity of my own perception. This in turn made designing the collection less of a struggle and more of a playful exploration into questioning my perception.

4 DESIGN PROCESS

Chapter four, with all its subcategories, is focused solely on the production of the thesis. The following chapters discuss the practicalities of designing a textile and clothing collection inspired by perceptual phenomena. They discuss my design process and deepen the relationship between theory and production.

4.1 Mood and Colour

My design process always begins with colour. For me, colour ultimately determines the whole mood of the collection. I tend to prefer cool colours and tones, because to me they represent something otherworldly, abstract, ethereal, surreal and dreamy, whereas I often associate warm colours to physicality, heaviness and a certain seriousness that does not appeal to me.

The colour palette of my thesis collection is vaguely inspired by a form of colour blindness called tritanopia, which was already discussed in chapter 3.2.6. Essentially, tritanopia is a form of colour deficiency that affects a person's ability to detect yellow tones of colour. I first came across with tritanopia through an image plugin called Vischeck, also introduced in chapter 3.2.6.

At the beginning of my design process I played a lot with Vischeck's colour simulation function to help challenge my colour perception and to question my colour choices. I became especially intrigued by tritanopia, because I had never heard about or seen this form of colour blindness before. As a result, the colours seemed extremely fresh and surreal to me. As the design process progressed I did not use Vischeck to confirm every colour or tone of the materials of the collection, but rather trusted my own eye while still avoiding yellow tones. The final colour palette of the collection mostly consists of frosty light blues, pinks, mints and violets that are either presented individually creating a monochromatic look or blended to present a more ombre effect.

Colour-wise, I was encouraged to try something unorthodox in my design work when I discovered that one of the looms that I wanted to use for my woven fabrics had a black warp. Previously I had never used black in my designs because I always felt it was a colour that was too generic and a far too easy and obvious choice for the use in garments. This time, however, I felt that my otherwise girly and excessively fragile colour palette needed more structure, contrast and oomph, hence black was happily added to the mix.

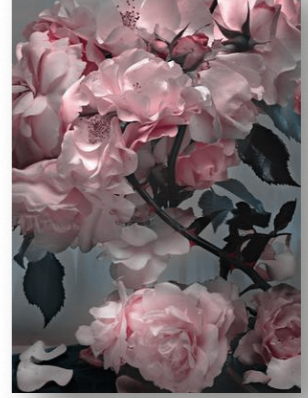
Once the colours were set, the mood of the collection began to form by itself. The surreality and dreaminess of the cool colours guided the whole

Inspirational pictures combine static sceneries and graphic lines with the exuberance of flowers and portray an otherworldly mood with surreal colours and kooky silhouettes.

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The portrait of Catherine Deneuve embodies the quirky spirit of the swinging sixties.

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mood of the collection to become somewhat absurd and intensely dreamy. To me the colours tell a story about a whimsical world beyond my normal perception: a utopia where one can eat cotton candy for breakfast, wear flowers for a dinner party and ride an ostrich to work.

The chosen colours convey a certain air of innocence and naivety that is also evident in the mood of the collection and the whole appearance of the garments, patterns and textiles. Furthermore, the collection was ideologically as well as visually inspired by the post-war era of the sixties with its hedonistic and irresponsible nature - especially the so-called swinging sixties scene and Ossie Clark were major inspirations for this collection because of their carefree and flamboyant spirit.

4.2 Textiles

Textile design has always been a quintessential part of my design work. I can communicate and express the story and inspiration behind a collection better through textiles than through silhouettes. In my design process textile development is always at the core, and it greatly inspires and affects the silhouettes of the garments.

To me the process of textile design is always an intensely playful, creative and educational one. There is also something very satisfying in the hands-on approach that textile development requires. In my experience, there is a distinct difference between designing garments and developing textiles. When I am sketching for a garment, draping or making patterns for it, I am a designer producing a garment that can be worn by a person. However, when I am drawing an illustration for a pattern, mixing colours for screen printing or sampling different yarns on a hand loom, I feel more like an artist creating my next masterpiece or an explorer discovering uncharted parts of the world. As a textile designer, I am free to create whatever I want, whereas with garments I am always somewhat restricted by the human form.

According to Ingrid Loscheck (2009, p.15) fabric can in fact compare to paint as a medium for a designer or an artist. In her book *WHEN CLOTHES BECOME FASHION: DESIGN AND INNOVATION SYSTEMS* Loscheck talks about the various characteristics of different textiles. Rigidity, mobility, density and delicacy make textile an extremely adaptable medium that can create flat surfaces as well as be folded or moulded into a plastic form. The diverse and highly adaptable nature of fabric is what gives it the nonmaterial qualities comparable to what paint does for an artist. (LOSHECK 2009, P.15)

If textile is a medium then garment is a blank canvas. Hence, fabric de-

sign is equally as important as the shape of a garment, if not even more important. Textile affects not only the visual aspects but also the tactical aspects of the garment. In a sense, fabric creates substance for clothing (LOSHECK 2009, P.15).

Essentially fabric - physically being the closest thing to the body - acts as a second skin, greatly affecting the character and feel of the garment. It determines whether the garment feels soft or coarse; heavy or lightweight; flowy or stiff. In my design process fabrics always come before the shapes. Ultimately, material always dictates what kind of shape the garment can take on, how the garment moves and what kind of visual impact it has. The fabric development process of this thesis is discussed further in the following chapters.

4.2.1 Patterns

'IN ADORNING THE BODY AN ORDER IS SUPERIMPOSED ON AN EXISTING ORDER, RESPECTING OR SOMETIMES CONTRADICTING THE SYMMETRIES OF THE ORGANIC FORM.' (E H GOMBRICH CITED IN FOGG 2006, P.65)

A pattern is essentially a repetition of a motif or element consisting of any shape or line (PROCTOR 1990, P.8). A more delightful and poetic definition of pattern is offered by Marnie Fogg, MA in art and design advanced practice and theory and media consultant to the fashion industry. In her book *PRINT IN FASHION* FOGG (2006, P.8) describes print as a *'DISTRACTION THAT REQUIRES RECOGNITION'*. She argues that decoration is never pointless, but in fact hugely purposeful: a strategically placed pattern can trick the eye and enhance, elongate or exaggerate the body. Therefore, pattern is an integral part of the design and never an afterthought.

From Fogg's definition of print it can be seen that the meaning of pattern - though largely decorative - is not solely superficial. Furthermore, pattern can simultaneously create both surface and substance. This means that pattern can also be an integral part of the physical structure of a dress, a woven textile or even a skyscraper. (PROCTOR 1990, P.8)

Pattern is always present in my design work. For me it is a constant that brings depth to the garments and elaborates the story and inspiration behind the collection. In this thesis pattern has an even larger role than in my previous works, because patterns are used to create woven textiles. Thus, the motifs used not only affect the surface of the textile as prints, but also affect the structure and feel of the garments.

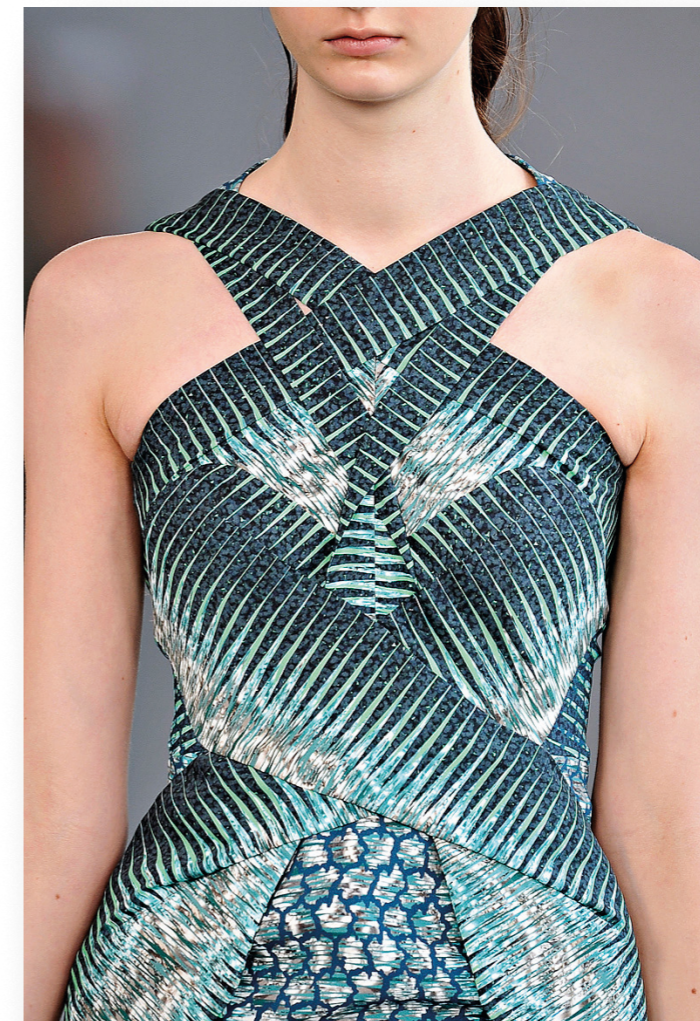
In my past work my patterns have always been feminine, soft, abstract and vague. With this thesis, however, I challenged myself to work with

Mary Katrantzou's figurative pattern transforms the body into a garden, whereas Peter Pilotto uses abstract pattern to dissect and accentuate the female figure.

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In my previous designs patterns have always been feminine, abstract and vague.

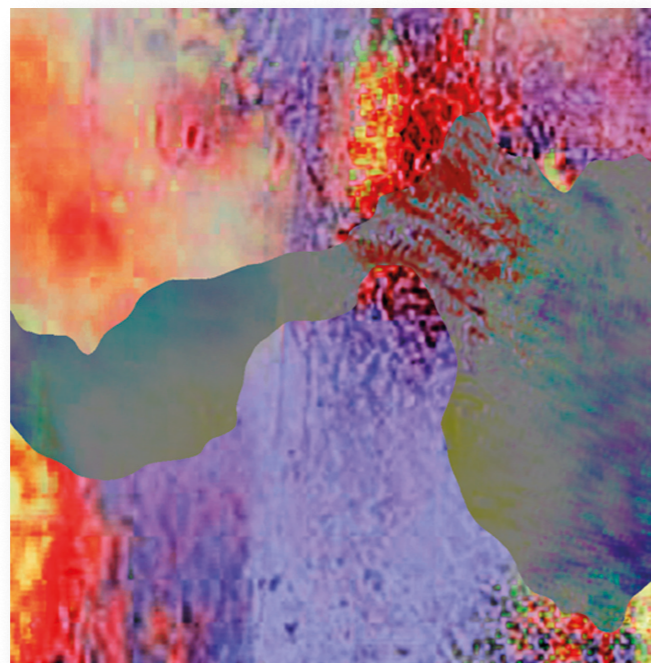
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figurative motives. All together the collection includes three patterns, used in different colour ways, materials and sizes. The motifs are roughly divided into two sections: plaid and floral patterns.

The goal of the patterns is to juxtapose femininity with graphic elements while still maintaining the air of lightness and femininity that is inherent in my designs. The motifs are classic, even traditional, yet they aim to reverse and alter the traditions and stereotypes imposed on them. The following two chapters delve deeper into the motifs and patterns and their relationship with the data gathered for this thesis.

4.2.1.1 Flowers

The collection of this thesis consist of two floral patterns that form contradicting visuals. While one creates an organic, asymmetrical, natural and fluent look, the other appears more structured, symmetrical and flat. Before going further into the details of the design of these patterns, a few stereotypes and traditions of floral motifs need to be covered.

Throughout history, human beings have felt a need to replicate nature. This seemingly inherent desire to connect with the purity and innocence of nature is all the more apparent in the 21st century, when urban life keeps distancing itself further and further from the natural world. (FOGG 2006, P.24)

According to Li Edelkoort, an acclaimed Dutch trend forecaster, our infatuation with flowers and plant life is not just a fad, but a counteraction to our hectic, stress-ridden and cybernetic modern lifestyle. Unable to enjoy the reassuring nature of flowers and plants in the urban outdoors, we often resort to decorating our bodies with the organicity of floral prints. (EDELKOOT CITED IN FOGG 2006, P.31)

The floral motif is romantic by definition, because flowers are often given to charm or to appease. Therefore, we associate flowers with romantic events in our lives. (FOGG 2006, P.27) As a result, people seldom link negative connotations to flowers and often conceive them as approachable and well-liked. (YATES 1986, PP.38-39) This stereotype of the romantic, fragile and organic flower motif intrigued me and made me wonder, how to contradict and challenge the inherent femininity and softness of the floral motif in my own designs.

Initially, I was drawn to the flower motif due to its versatility and complexity. Being the best-selling and most common print motif in apparel as well as interior textiles over the past several hundred years, it poses an interesting question: how to make this seemingly obvious and traditional motif fresh and

Flowers have inspired artists over centuries.

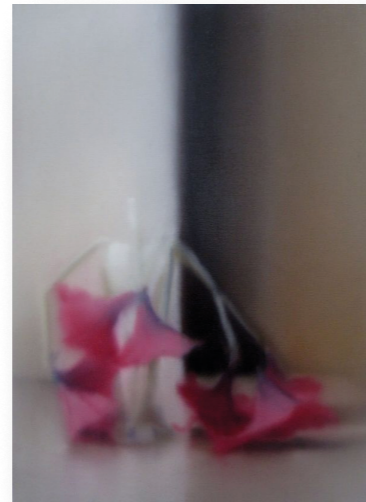
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The decor of Raf Simons' debut Haute Couture collection for Dior was a tribute to Christian Dior's floral fixation.

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exciting again? I approached the question by creating two floral patterns with the same theme, yet with contrasting visuals. While one pattern takes a more romantic and classical approach to the floral motif, the other offers a more challenging and computerised view.

The Wild Flowers pattern is done by drawing flowers by hand, scanning the pictures and placing them together in Photoshop to form a pattern for screen printing. The flowers are asymmetrically placed in a classical all-over layout, which means that together they form a composition covering the entire design plane. The flowers have dimension and shadow, and as a result they appear rather realistic. They represent the traditional view of fragility, organicity and softness often associated with flowers. Consequently, the classical appearance of the pattern reflects the organicity of the design process behind it.

In the Artificial Flowers pattern the design process is completely computerised. The pattern is created by cropping images of real flowers, placing them in formations and mirroring the images to create a perfectly symmetrical pattern. As was discussed in chapter 2.2.4, perfect symmetry is virtually non-existent in nature, except on a molecular level. As a result, the mirrored flowers of the Artificial Flowers pattern appear digitised to the extent that they do not seem real anymore. The flatness and sleekness of the flowers makes them look disturbingly intact and fake. Ironically, the drawn flowers of the Wild Flowers pattern appear more realistic than the photographed flowers of the Artificial Flowers pattern.

While I was making the Artificial Flowers pattern, I noticed an intriguing unfocused area in the corner of my eye. As mentioned in the theoretical part of this thesis, blurring out non-relevant information is a basic function of perception that helps us concentrate on the most important stimulus and tune out the rest. To me this blur phenomenon looked visually appealing, so I made it an integral part of the pattern using Photoshop's blur filter.

The blur effect as a part of the design is my attempt to visualise what is normally dismissed completely by our perception. Interestingly enough, when you concentrate looking solely at the blur part of the pattern, the originally sharp areas of the pattern also appear blurred and unfocused. The blurred areas of the pattern are visually demanding, yet their symmetrical placement creates structure. When the whole pattern with its multiple repetitions is seen from a distance, a second pattern of vertical stripes and checkers is formed by the sharp and unfocused areas of the flowers.

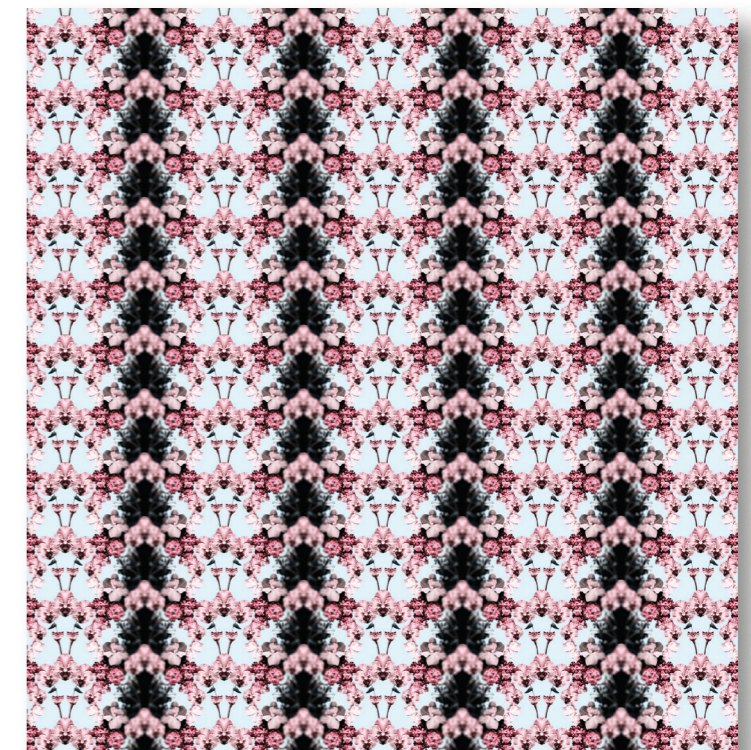
By combining the two different views of the same theme, I wanted to question the stereotypes and traditions of floral motifs as well as challenge preconceived notions of our perception. When presented individually on a fabric, the Wild Flowers pattern appears soft, classical and realistic, yet when both

Close-up of the Artificial Flowers pattern reveals the blur effect. A broader view of the pattern presents its geometrical aspect of vertical and horizontal lines.

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The Wild Flowers pattern appears traditional and realistic when printed on a fabric.

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When the Wild Flowers pattern is placed in a different context, for instance, together with the Artificial Flowers pattern on a garment with a kooky silhouette, it becomes more contemporary and surreal.

floral prints are included in the same garment, both are perceived equally surreal and otherworldly.

Furthermore, when presented in a garment with outrageous shapes and in monochromatic colouring, the seemingly traditional Wild Flowers pattern appears more dreamlike and absurd. As already discussed in the theory of this thesis, the context of the stimulus - in this case the pattern and its colouring, placement and surroundings - greatly affects our perception.

4.2.1.2 Plaid

The second motif for the patterns of the collection is plaid. Plaid is a pattern that normally consists of squares that are formed by intersecting vertical and horizontal lines. Unlike the floral motif, plaid appears abstract, structured, geometrical and even somewhat cold and hard. Fogg (2006, p.64) explains that traditionally graphic motifs, like the plaid, create tension when placed against the fluidity of the human body. Therefore, geometric patterns tend to be oppositional to the soft human form, creating either a disguise or enhancement for the wearer's body.

Geometric and linear motifs, such as the plaid, are visually pleasing due to our innate preference for order and our visual ability to seek out straight lines (FOGG 2006, p.138). Though plaid is a seemingly simple motif, it is often the most versatile design, because it can be endlessly altered by varying colour, scale, texture and proportions (PROCTOR 1990, p.10). This simple complexity of the plaid made me choose it as the other motif for the collection.

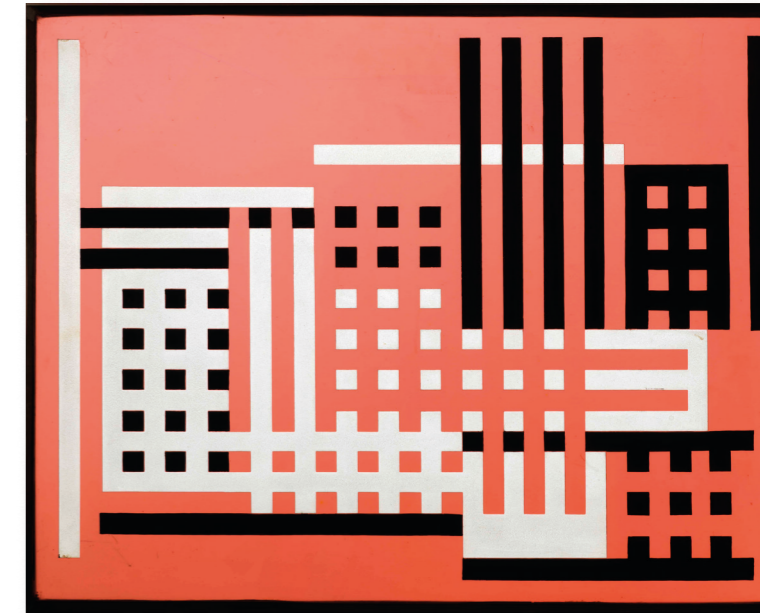
Plaid is the only motif of the woven textiles of this thesis. I chose to use it because it is a classical, yet a hugely versatile pattern, hence it allowed me to play with different structures and materials. Altogether I made three variations of the plaid in the woven textiles by changing the motif's scale, proportion, materials and structures. Plaid was also made into a silk screen pattern to bring contrast to the printed textiles. Chapter 4.2.2 discusses the screen printing process and chapters 4.2.3 to 4.2.3.3 talk more about the plaid design in the woven materials.

Like with the case of the floral patterns, the goal of the plaid patterns was to challenge the traditions of the motif and to find versatile interpretations of it by changing the context of the pattern. For example, while a plaid pattern screen printed with black pigment on smooth shangtung silk appears graphic and sharp, the same pattern in a woven fabric with satin structures and mohair yarn gives a completely different soft appearance.

Furthermore, the plaid motif was used as a contrasting pattern to juxta-

Like the floral motif, multiple interpretations of the plaid have been made by artists and fashion designers alike.

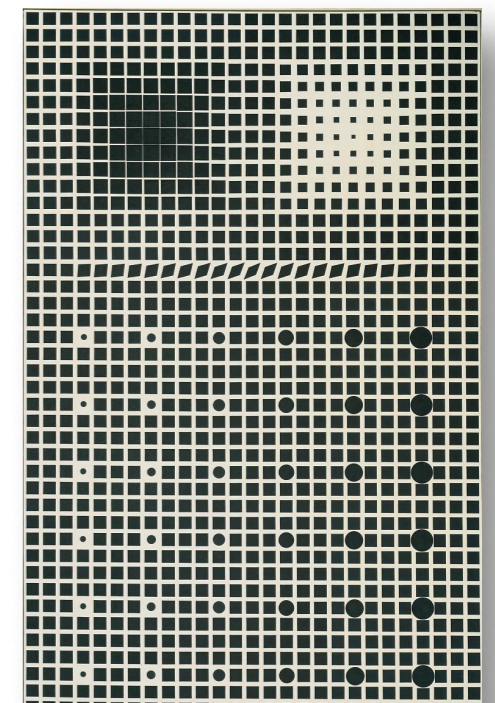
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When placed on a curved shape the oppositional plaid pattern enhances the exaggerated shape even further.

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pose the seemingly organic floral patterns. Interestingly enough, in some garments the roles of graphic and soft are reversed as the plaid appears soft and fragile while the floral pattern becomes bold and sharp. The contrasting aspect of the plaid was also utilised in framing and enhancing the human form and in counteracting the curved shapes of certain garments.

4.2.2 Silk Screen Printing

As mentioned earlier in chapter 4.2.1.1 the Wild Flowers pattern is a silk screen print based on hand drawn flower images, while the Artificial Flowers pattern is a digital print created in Photoshop. The Artificial Flowers pattern was digitally printed for me in the Netherlands through a printing company called Print Unlimited. Because digital printing is a rather simple and quick process and because I was only involved in the actual pattern design, which was already discussed in chapter 4.2.1.1, this chapter focuses solely on the silk screen printing process.

The Wild Flowers pattern was done through scanning pencil drawings of flowers, adjusting the brightness and contrast levels of the images, composing the elements together and finally rasterising the image to create a floral pattern ready to be printed on a transparency and exposed on the silk screen. All the silk screen prints were printed on cut pattern pieces with two centimetres extra allowance for shrinkage. This made me more in control of print placement, and as a result made the printing process more efficient, because it enabled me to print several pieces without washing and drying the screen.

All the silk screen prints of the collection were made with pigment dyes. Not only did this save time, but it also kept the colour on the surface of the textile and in some cases stiffened the fabric and changed its character. Using pigment paste also allowed me to have more control over the final colour of the prints, because with pigment no steaming or washing process is needed. Therefore, the printed colour is constant unlike with reactive dyes. Consequently, some tests I did with reactive dyes revealed that they were unsuitable for a few of the fabrics used in the collection because of the coating on the surface of the fabrics.

I mixed the colours before printing and made small tryouts, although in a few printed textiles I mixed the colours while printing to create a gradient-like mixture of colour. This was done by pouring different colours on the screen in stripe-like formations and pressing the colour on to the fabric with a squeegee to blend colours and to create new ones. This iris printing technique of mixing colours on the screen creates unique and uncontrollable colour for-

The original pencil drawings
of violets and poppies.

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Iris printed Wild Flowers pattern.

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mations and brings movement to the print. Unfortunately, I became familiar with the technique only towards the end of the screen printing process, and was only able to use it in three garments.

4.2.3 Woven Textiles

The thesis collection consists of three woven fabrics, which I designed and which were woven for me in Tampere University of Applied Sciences. The fabrics were designed and developed during a Jacquard Workshop course that was taught by Maija Fagerlund in the early spring of 2013. Two of the designs were made with a jacquard loom and one with a 12-shafted shaft loom.

The process of designing the fabrics from initial swatches to final fabrics took about three months and included dozens of working hours making tryouts on the small TC1 jacquard loom and shaft looms of the weaving studio of the Aalto University School of Arts, Design and Architecture, as well as two excursions to test out the yarns and designs and to weave the final fabrics in Tampere University of Applied Sciences.

During the textile design process I made samples with scrap yarns in versatile colours and with different feels. As a result the visual of the samples was at times so disturbing that I had to close my eyes to disregard the unpleasing aesthetics and to feel the essence of the textile. By closing my eyes I could always find something intriguing and worth developing further even if the woven sample was aesthetically displeasing.

The goal for all three fabrics was to focus on the tactility of the textiles and to play with yarns and woven structures rather than with the design of the pattern. Therefore, I chose to use the rather simple plaid pattern that I altered by changing its size, proportions, woven structures and yarns. The result was a collection of three plaid patterned woven fabrics with three different characters. The following chapters discuss each fabric further.

4.2.3.1 Soft Plaid Paradigm

The fabric that I designed first is a mohair plaid design. It consists solely of different lengths of double weave satins that alternate places so that the two sides of the fabric are perfect opposites of each other. The yarns used are mohair, a metallic viscose-polyester mix and a transparent polyester-polyamide mix.

In this fabric I wanted the plaid pattern to be evident, clear, three-dimensional and soft. The pattern is created through two contrasting parts of

A selection of the collection's fabrics.

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The plaid design of the soft mohair fabric can be easily detected tactically.

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the plaid. Firstly, there is the 2-end double layer satin that forms squares and then the 20-shafted satins that surround the square. Mohair floats of the satin grow gradually as the fabric rows increase creating a subtle gradient effect that gives the fabric more depth.

The goal with this fabric was to focus on the tactical sense. The metallic square areas form a flat and even surface that feels cool to the touch, whereas the mohair creates a soft and uneven fluffiness throughout the surface. Both textures are easily detectable with the use of active touch. The contradicting sensations of the metallic stiffness and the fluffiness of the mohair form a plaid pattern that can be easily detected even without visual sensations, thus making the fabric tactically interesting.

4.2.3.2 Translucent Plaid Paradigm

The second woven fabric of the collection is a design based on floats. It consists of a 2-weft system 2-end satin, floats and a double layer tabby structure. The yarns used are baby pink mercerised cotton and silver coloured viscose-polyester mix. The metallic floats form square areas, the 2-end satin forms light pink horizontal and vertical lines surrounding the squares, and the double layer tabby binds the floats to the underside of the fabric while creating metallic vertical lines on the top of the fabric.

As already discussed in chapter 3.2.3, viewpoint can affect our perception tremendously. This is exactly what happens with this float fabric. The metallic float areas change their appearance when seen from different angles and in different lighting conditions: at times the metal yarn appears translucent and the squares disappear almost completely into the pink haze of the background fabric whereas when the light hits the floats from a different angle it's reflected off the metallic yarn shimmering and giving the fabric a different appearance with illuminated squares. These changing floats challenge and contradict the stereotype of the traditional plaid motif by masking the graphic lines and instead make the pattern appear somewhat soft, feminine and vague.

Initially my goal with this fabric was to give its surface versatile characters that change depending on lighting conditions and the viewpoint of the perceiver. The ambiguity of the textile creates an illusion of several coexisting realities that are equally as real or imaginary, depending on how one looks at it. Due to the altering visual of the surface, the factual nature of the textile can only be experienced tactically by feeling the surface with its floats and subtle vertical lines.



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The plaid design with floats changes appearance depending on lighting conditions and viewing angle.

In contrast to the sharpness of the Artificial Flowers pattern the ambiguous plaid appears light and feminine.

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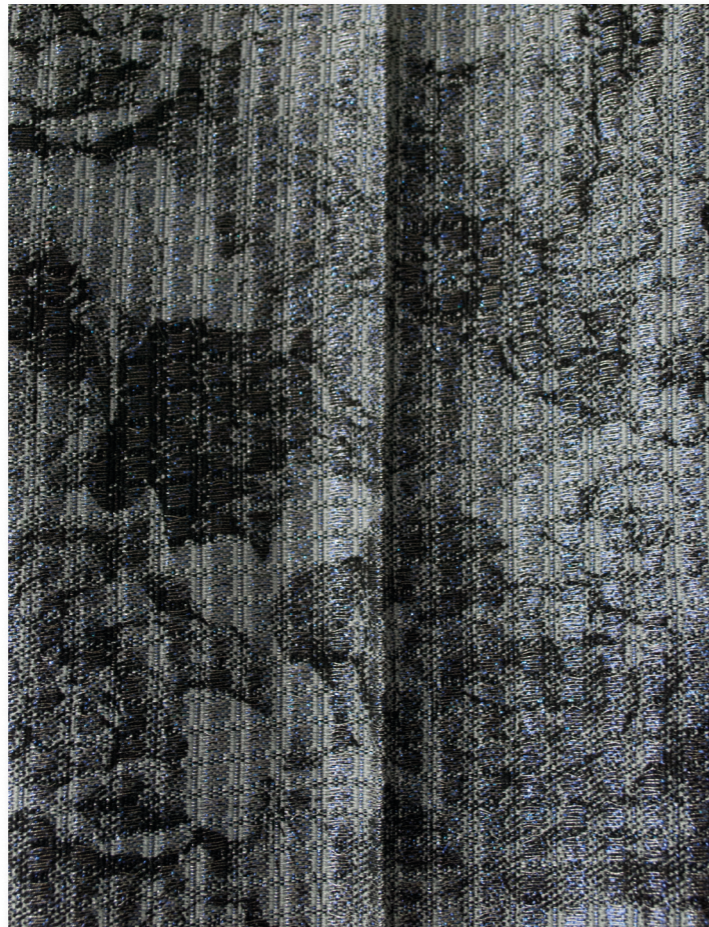


The small scale plaid design was screen printed with the Wild Flowers pattern.

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4.2.3.3 Small Plaid Paradigm

The third fabric is a sort of smaller version of the plaid fabric with floats. This fabric is a 12-shaft loom design and it consists of 2-weft system structures such as the float, 6-end satin and tabby.

Due to material and technical difficulties I was unable to use the yarn I had tested with this fabric, thus I had to rely on a secondary choice. The final composition of the fabric is baby blue mercerised cotton, metallic viscose-polyester mix and translucent polyester-polyamide mix. The change of yarn caused the final fabric to look shinier than intended, therefore I decided to screen print flowers on top of the textile.

The feel of this fabric is more coarse than the feel of the two other woven fabrics, due to the shorter floats of the metallic yarn. As a result, the fabric is also more dense and structured. Moreover, the combination of the transparent yarn and metallic and baby blue cotton yarns makes the colour of the fabric subtly iridescent with the colour of the textile altering between silver and lilac. The screen printed black floral pattern brings another dimension to the fabric by merging the two motifs and techniques.

The purpose of this fabric was to present the plaid pattern in a smaller scale to give it almost a surface-like structure in contrast to the two larger scale clearly pattern based designs. I also felt that a smaller scaled design was needed to create diversity in the collection of textiles. Ultimately, this small plaid fabric ties all the fabrics of the collection together by combining both the technique of weaving and printing as well as combining the two motifs used in the collection with the screen printed flowers on top of the woven plaid surface. Unfortunately, only about two metres of this fabric were usable for the collection, hence the fabric is used only in one pair of tailored pants.

4.2.4 Bonding

The technique of bonding is traditionally used to create a non-woven fabric that is made by combining multiple synthetic fibres either with heat or adhesives. These bonded fibre fabrics are mainly used for interlinings because they are crease-resistant and easy to sew and to clean. (BBC N.D.) In this thesis, however, bonding refers to a technique of glueing two woven fabrics together with the use of a special fibre-like glue fabric. Bonding is mainly used in this collection because of its abilities to maintain form.

The easiest way to combine woven textiles through bonding is to cut both textiles and the glue fibre fabric according to pattern, then place it in between

the two other textiles and press them all together in a heat press for a few seconds, depending on the thickness of the materials used. It is also advisable to include an extra seam allowance on all the fabrics because placing all the layers precisely in line and on top of each other can otherwise be rather tedious work.

Once a fabric is bonded it is laid flat over night to allow the glue to dry fully. When the glue has dried, the fabric appears stiff to the point of being almost unmanageable, yet it can be shaped into virtually any shape imaginable as long as it is pinned or placed in that shape for at least a few hours. If the shape turns out in an undesired way, the bonded fabric can be brought back to its original stiff and flat state with the help of steam.

In the production of this thesis the technique of bonding is used in most of the textiles due to various reasons, the most important one being to make otherwise soft and shapeless fabrics stiff. By bonding two fabrics together a whole new fabric is created. In a way bonding gives the fabric new features because it drastically changes the character of both original fabrics. What used to be soft and flowy now becomes crisp and bouncy. Even thin silk fabrics that are characteristically soft, smooth and flat can be transformed into neoprene-like textiles that hold three-dimensional shapes amazingly well.

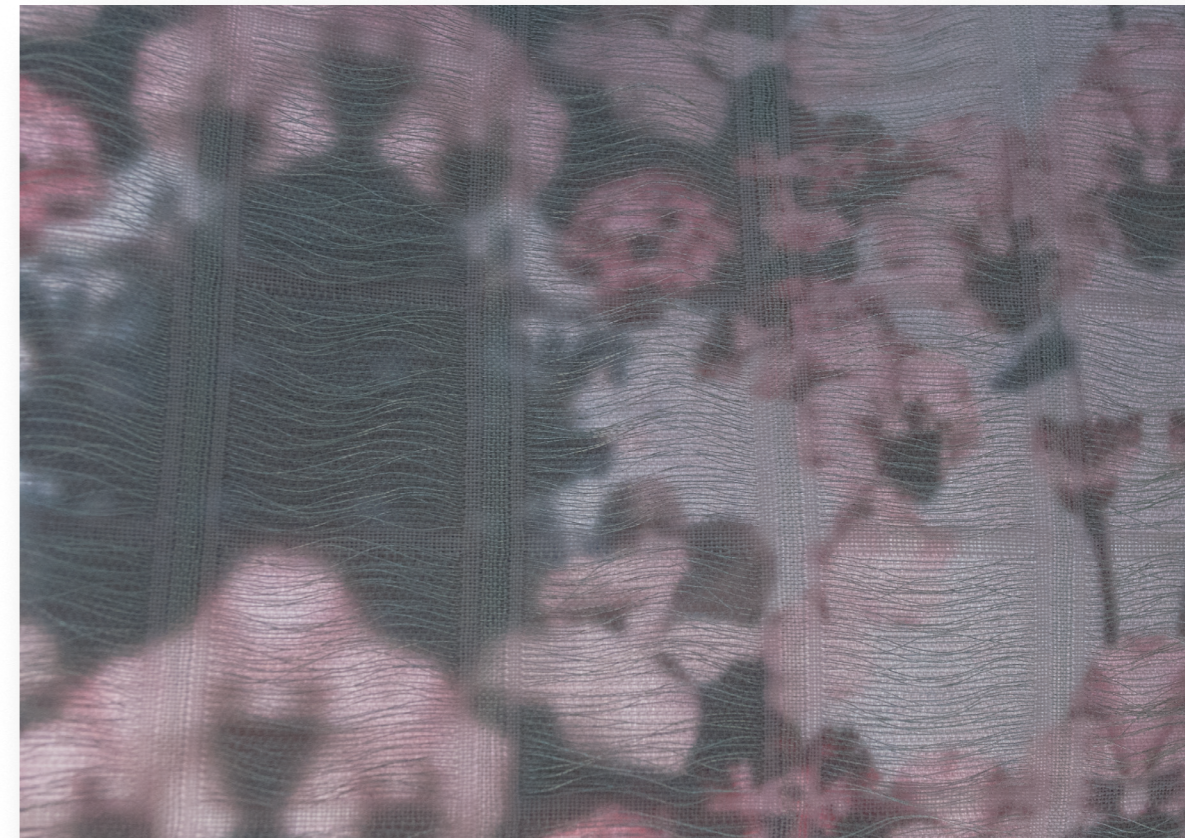
Moreover, bonding is used to bring two contrasting patterns or textiles together to create intentional dissonance. When the right side of a fabric consists of a fragile floral pattern, the graphic black and white plaid pattern on the wrong side adds an unexpected and delightful twist to the garment.

An intriguing juxtapose can also be perceived with the woven fabric with floats when it is bonded with the smooth digitally printed crêpe de chine fabric. The inside of the garment consisting of crêpe de chine feels pleasant and soft on the skin, while the outer side shows the interesting textures of the woven floats. When the fabric is lighted from the back, it gains even more dimension by becoming slightly transparent, revealing a vague and subtle version of the digital print under the woven surface.

Though the bonded fabrics of the collection weigh excessively due to their double-sidedness, they still manage to appear very airy and even gravity-defying because of their unique ability to maintain three-dimensional shapes. This dissonance between the physical and the visual world creates an intriguing contrast since heavy garments are often seen as droopy and oppressive rather than ethereal and upbeat.

Furthermore, an element of dissonance can be seen in a garment with a feminine and sensitive floral pattern on the right side and a more graphic and sporty textile on the wrong side. This juxtapose surprises the perceiver since the wrong side of the fabric is only visible from certain angles - it is almost as if the fabric has a secret life and another character on the inside of the garment.

65



The subtle transparency of the woven fabric with floats reveals an unexpected side of the bonded textile.

The black and white bias tapes tie together contrasting patterns of the right and wrong sides of the garment.

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A silk-wool mix with the Wild Flowers pattern is bonded together with a heavy cotton fabric with the Plaid pattern to create a stiff textile that is able to hold gigantic shapes.

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4.3 Silhouettes

'IF THE HUMAN BODY IS SEEN AS A SPATIAL FORM, THE SKIN REPRESENTS THE DEMARCATION LINE BETWEEN THE INSIDE AND THE OUTSIDE' (LOSHECK 2009, P.17). Similarly, OXFORD DICTIONARY (N.D.) defines the word silhouette as 'A REPRESENTATION OF SOMEONE OR SOMETHING SHOWING THE SHAPE AND OUT-LINE ONLY'.

In garments a silhouette can be used to show or to hide; to accentuate or to diminish; to follow or to alter the human figure. According to Loscheck (2009, P.17) clothing can be seen as an extension of the 'CORPORAL SPACE BOUNDARY AND THE INTERFACE BETWEEN A PERSON'S CORPORAL SPACE AND THE EXTERNAL SPACE OF THE ENVIRONMENT'. Loscheck (2009, P.17) also argues that since clothing is always in connection to the human body, it forms 'A SPACIAL EXTENSION OF THE BODY AND ALTERS OUR IMAGE OF THE BODY'S SURFACE AND FORM'.

The garments of this thesis aim to both accentuate and to alter a person's corporal space through proportions and exaggeration of three-dimensional shapes. While a part of the garment remains fitted, another part looks like it has been placed under a magnifying glass and scaled to unnatural proportions that alter the outlines of the human form.

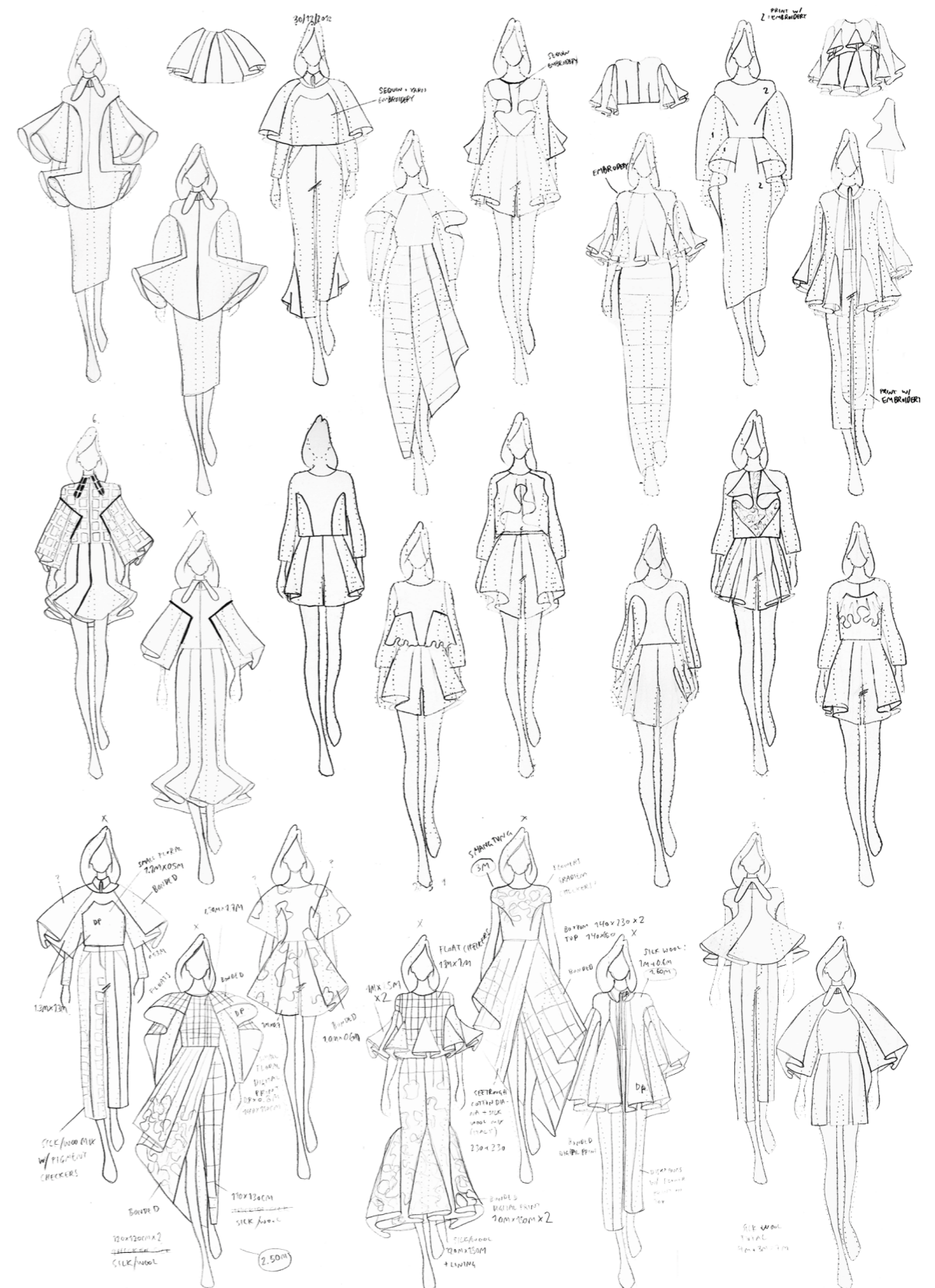
In a certain sense, the garments are extremely uncomplicated, yet their proportions make them kooky and surreal looking, almost like they are out of this world. The tactical sense is also incorporated in the designs not only through different structures and textures of the woven materials but also through the bold and well distinguished shapes of the garments.

Due to my intense love of flowy silk fabrics and ambiguous silhouettes I have in the past relied heavily on the human form to give my garments life and shape. My previous designs have been so reliant on the wearer that they have lost their spirit when placed on a hanger and almost taken on the form of a draped piece of fabric instead of a garment with plasticity. In this thesis collection the purpose of the garments is quite the opposite, because the pieces are made to enhance, transform and enliven the human form. The ultimate goal is that the shapes of the garments are strong enough to make an impact on their own, even when separated from the human figure and placed on a hanger.

The main idea of the silhouettes of the garments was to exaggerate certain shapes as much as possible while toning others down to a minimum. Essentially the most voluminous garments create surreal and over-the-top shapes that seem unrealistic on the human form. All of these garments, however, are partially fitted, thus still revealing something about the user's body, whether it be the shoulder line, waist or bosom. Because the collection mostly

Sketches of garments.

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consists of separates, the most outrageous pieces can be worn with more demure and simple garments that compliment the exaggerated shapes. This in turn creates contrast and makes the voluminous parts of the garments appear even larger while still enabling some parts of the body to be seen as they are.

The shapes of the garments were mostly inspired by the phenomenon of perceptual selectivity. As mentioned already in chapter 3.2.1, our perception selectively dismisses some stimuli while focusing on another. This basic principle of selectivity was applied to the shapes of the garments, where the goal was to create garments that are three-dimensional to the point that they can stand on their own, appearing almost gravity-defying. The exaggeration of shapes was made possible with the use of bonded fabrics that allow the garments to take on a required stiffness of form.

In my design process perceptual selectivity acts as a magnifying glass traveling around the visual plane until encountering something worth stopping for. When perception detects something of interest, it stops to zoom in on the target making its surroundings disappear. In my garments selectivity of perception is pushed to its limits by exaggerating the selected parts of certain garments. As I focused on a pleat of a sleeve, it kept growing to gigantic proportions while the rest of the garment remained more understated and simple in comparison.

Moreover, the principle of symmetry was applied to the garments to create harmony and to compliment the outrageous shapes. In some pieces asymmetrical aspects were also used to create diversity in the silhouettes. Furthermore, the orientation of the garments plays an important role in the perceptual experience of the collection. The idea that something can be seen as simple and fitted from one direction and extravagant and goofy from another intrigues me. The concept of garments that are transformed by orientation was implemented especially in one outfit in which the back of the shirt and skirt are overly simple and fitted, while the front is covered with voluminous cone-shaped parts.

The theory of perceptual complexity was also implemented in the silhouettes of the garments. As mentioned in chapter 2.2.2, people tend to prefer stimuli that is of intermediate complexity, hence three-dimensional shapes are considered more appealing than flat ones. Obviously, a garment is always a three-dimensional object, but my goal with this collection was to take this three-dimensionality to enormous proportions. While the actual shapes of the garments are rather simplistic, complexity is created by the unexpected volume of the garments.

The following chapters present a chart that clarifies the diversified relationship between the theory and production and introduce the final collection of garments and textiles.

5.1 Chart of Implementing Theoretical Grounding

Towards the end of writing my thesis I noticed how multidimensional my design process had become and how complex the relationship between the theory and production seemed when written down, though in my mind they were always inextricably linked. To demystify my design process, I decided to make a chart that lists the inspirations behind the collection and clarifies the connection between the gathered data and the production of this thesis. The chart consists of the most influential perceptual phenomena and their counterparts in the production. This simple chart makes it easy to see which part of the theory was implemented in each design. Moreover, it clearly shows which perceptual phenomena affected my designs the most and which were not as influential.

The theory presented in the chart consists of the following: *SELECTIVITY, DISSONANCE, MOTIVATION/COMPLEXITY, SIZE/VIEWPOINT/ORIENTATION, CONTEXT OF STIMULUS, SYMMETRY, TRITANOPIA AND THE TACTICAL SENSE*. I decided to add ‘context of the stimulus’ as its own entity, because I realised that much of the production focused on trying to reverse stereotypes and traditions by changing the context of a pattern, motif or textile, even though perceptual context did not have its own chapter in the theoretical part of this thesis. The production section of the chart focuses on the main design aspects of the collection, which are the following: *COLOUR, PATTERNS, WOVEN TEXTILE DESIGNS, BONDED TEXTILES AND SILHOUETTES*.

According to the chart, the most influential data of the thesis includes size, viewpoint and orientation, the context of the stimulus and the tactical sense. For instance, all woven textile designs were strongly influenced by the concept of active touch, which I used excessively during the development of the designs. Furthermore, the data on the tactical sense was implemented in the bold and clearly three-dimensional silhouettes of the collection.

Moreover, while designing the woven materials as well as the Wild Flowers pattern and all bonded textiles, I often referred to the data on perceptual context while trying to reverse and alter preconceived notions and stereotypes. In other words, by altering the context I tried to make a fragile and

Theoretical Grounding

Tactical Sense				X	X	X		X
Tritanopia	X							
Symmetry			X					X
Context of Stimulus		X		X	X	X	X	
Size / Viewpoint / Orientation					X	X	X	X
Motivation / Complexity								X
Dissonance							X	
Selectivity			X					X
	Colour	Wild Flowers Pattern	Artificial Flowers Pattern	Mohair Plaid Textile	Float Plaid Textile	Small Plaid Textile	Bonded textiles	Silhouettes

Production

classical flower pattern seem modern and surreal or to make a traditionally graphic plaid pattern appear soft, vague and feminine.

The theories of size, viewpoint and orientation were implemented especially in the multifaceted silhouettes of the collection that were designed with different viewing angles and the orientation of the garments in mind. Furthermore, the double-faced bonded fabrics as well as the woven textiles with translucent floats and iridescent small plaid pattern concretise the effects of viewpoint alteration.

According to the chart the data on perceptual selectivity and symmetry were each influential for at least two of the collection's design processes. Perceptual selectivity not only inspired the blur effect in the Artificial Flowers pattern but also affected the exaggerated shapes of the silhouettes. The data on symmetry affected the mirrored design of the Artificial Flowers pattern as well as the symmetrical and asymmetrical aspects of the silhouettes.

The data on dissonance, complexity and tritanopia were, in a sense, the least influential during the design process. However, all of them also guided certain aspects of design. Dissonance is, for example, evident in the juxtaposing of different fabrics, patterns or textures in the double-sided bonded fabrics. Furthermore the data on motivation and complexity was implemented in the three-dimensional shapes of the collection and tritanopia acted as a guideline for the colours of the collection.

Ultimately, the theory of this thesis made me question my perception, which in turn affected my design work tremendously. Gaining knowledge about various perceptual phenomena forced me to question not only my perception but also my previous design methods. This essentially altered my whole design process pushing me out of my comfort zone into new and unfamiliar design territory of stiff fabrics, figurative patterns and strong shapes.

5.2 Collection of Garments and Textiles

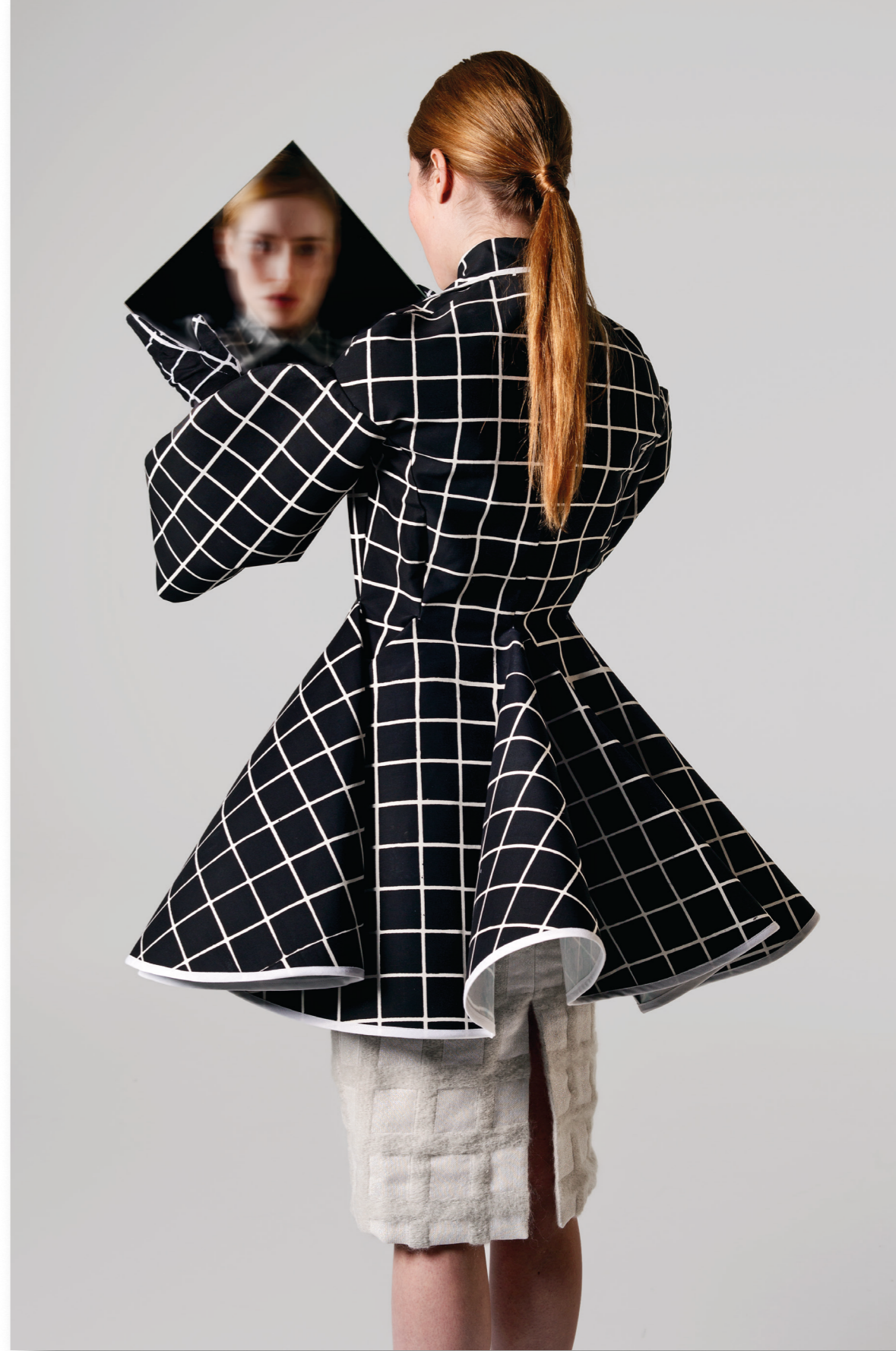
The most important result of this thesis is a women's ready to wear clothing collection consisting of nine outfits and the materials used in creating them. The collection mainly consists of separates and it entails three pairs of pants, two pairs of shorts, three skirts, five shirts, three coats and one dress. Besides these main pieces the collection also includes several 'styling pieces' such as clove and a sleeveless dress shirt for each look.

In September 2013 the collection was photographed by Helsinki-based photographer Sanna Lehto. In the photographs I wanted to highlight the voluminous shapes of the garments in a clean environment without any back-

ground clutter, thus the photo shoot took place in the photography studio of Aalto University School of Arts, Design and Architecture. Most of the photographs were shot against a white background without any props to let the exaggerated shapes of the garments create strong lines and curves in contrast to the neutral backdrop. A few outfits, however, were shot with a plant, a mirror, a movable wall and a white display square in the picture to play with depth and size perception as well as to create a more absurd mood.

The light in the photographs is soft giving an unnatural almost shadowless appearance. A house plant is placed in the background to bring an element of depth, yet the plant remains detached from its surroundings. The model appears expressionless, yet she has strength in her eyes. The surreal and dream-like mood of the collection is evident in the garments, shapes, surroundings and props depicting an otherworldly atmosphere.















6 CONCLUSION

6.1 Evaluation

The goal of my thesis was to design and produce a collection of garments and textiles based on the theory of perception and perceptual phenomena. A personal goal of mine was to develop my design methods by questioning my perception through the design process. Overall, I think I succeeded in reaching my goals commendably. I am especially pleased with the collection of garments and textiles, because I feel that it embodies my growth and development as a designer. Moreover, I succeeded in explaining my design process in a coherent manner, something I have been unable to do previously.

What I struggled with the most with this thesis was narrowing down the topic and finding the right kind of reference literature. I questioned my choice of topic several times during the first few months of working, because I felt like the topic was too wide and that I was in over my head. I often found myself lost in the depths of perceptual psychology and wondering how the theoretical approach to perception related to my work as a clothing and textile designer. I cursed myself for choosing a topic this abstract instead of something more tangible. However, as the collection started to form so did the overall topic of the thesis as I eliminated unnecessary theoretical aspects and concentrated on covering the basics of perception and a few perceptual phenomena as well as questioning the traditions of my own design process to make the thesis more condensed.

During the writing process connecting theory with design aspects proved challenging at times, because the data dealing with perceptual psychology seemed excessively academic and abstract compared to the practical approach of the design process. Then again, the contrast between the theory and production somehow forms a dialogue between the two: the theory offers knowledge and asks questions, while the production seeks answers and implements the gathered data into a visual form.

Looking at the collection of garments and textiles I feel immensely proud, because I can recognise the growth that took place during the process of creating this thesis. I feel satisfied, because I managed to create something new and unexpected of me. Yet I was able to maintain the essence of my delicate and feminine design aesthetic throughout the collection. The theoretical grounding is only subtly detectable from the final garments and textiles, because I wanted the pieces to have a life of their own, separated from perceptual theories and phenomena. For me the theory offered a basis for the collection that I could build on. The goal was not to design a collection that screams per-

ception or optical illusion, but rather to understand the effects of perception, to question my perception and traditions as a designer and to utilise certain perceptual phenomena to create garments that are both visually challenging and tactically exhilarating. In my opinion this thesis succeeds in doing so.

A selection of the collection was presented at the annual fashion show, Näytös 13, of Aalto University School of Arts, Design and Architecture in May 2013. One setback for the production of this thesis was not being able to execute the whole collection by May as I intended, because some of the garments still needed work and alterations to fit into the collection in a cohesive manner. I am, however, satisfied that I did continue the collection over the summer and completed it in August 2013. Now I can finally say that all the pieces make sense and that all of them have their own place and role in the collection.

Because of Näytös 13, the collection has also been recognised in international media: some of my outfits were featured in the internet versions of *A Magazine* Curated by and *Nordic Style Magazine*. Consequently, three looks of the collection were presented alongside other designers, such as Vuokko, Marimekko and Samuji, at Helsinki Fashion Weekend in an event showcasing the history of Finnish fashion. During the summer of 2013 pieces from the collection were also featured in the Finnish edition of *Elle* magazine.

6.2 Discussion

In the beginning of this thesis I pondered upon the effects of perception on my design work. What I determined based on the theory, is that perception is highly subjective and hugely reliant on context. I discovered that perception affects all aspects of the design process as well as life in general, because perception essentially determines how we interpret and understand all sensory inputs. Realising the limitations of perception made me question my own perception, which in turn enabled me to understand the traditions and limitations of my design work. Furthermore, considering my previous design methods helped me analyse the strengths and weaknesses of my own designs, and to cultivate my skills as a designer.

This thesis was ultimately a playful exploration of the ambiguity of perception as well as a personally important learning process for me. This thesis taught me how to work independently on a project larger than I had ever worked on before. Co-operating with the studio personnel of the Fashion and Clothing Design department as well as the Textile Design department also built my professional identity as I learned to let go of some aspects of my work by delegating and asking for help. Moreover, through this thesis I was able to

communicate my ideas and explain my design process to others better and altogether work more openly than before.

The entire process of this thesis has surprised me pleasantly. Initially I felt intimidated by the huge workload I was going to face and overwhelmed by both the freedom as well as the responsibility of creating my own project with only a few guidelines to follow. However, as I started working all my doubts and suspicions were replaced by the enthusiasm of educating myself on the foreign topic of perception and the excitement of designing a collection based on what I had learned from theory.

Undoubtedly, the goal of this thesis was not to innovate significant breakthroughs in the field of perception, but to explore aspects of perceptual psychology that affect human perception the most and to discover ways to utilise these aspects as a part of a questioning design process. Moreover, this thesis gave me the time and opportunity to work independently on strengthening my identity and voice as a designer.

In my future endeavours I will definitely keep questioning my perception, since it proved to be a successful method of working for me. The process of this thesis also confirmed me that my love of pattern, structure and textile is now definitely blooming and becoming stronger than ever. In the future I hope to concentrate even more on working with textile and pattern design, because it gives me the sense of artistry and freedom I long for in my work.

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Acknowledgements

Kirsi Niinimäki, Tuomas Laitinen, Reetta Myllymäki, Sari Kivioja, Niina Lahtinen, Eeva Heikkinen, Maija Fagerlund, Antton Nuotio, Aoi Yoshizawa, Essi Lehto, Helen Korpak, Tiina Alanko and My family.

Collection Photographs

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