

UNFINISHED STORIES



MASTER OF ARTS (M.A) 2016/2017
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Unfinished Stories

Master Dissertation

Master of Arts (M.A) Sustainability in Fashion 2016/2017

Esmod Berlin - International University of Art for Fashion

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1. INTRODUCTION

1.1 BACKGROUND

This year Earth Overshoot Day fell on the second of August, a date earlier than ever before in history. In approximately eight months we have used up the total amount of natural resources that the earth can possibly regenerate in one year (Earth Overshoot Day, 2017). Today's fashion industry is largely aligned to a linear way of production and consumption. It relies on large quantities of resources to quickly be manufactured into clothing, consumed and disposed shortly after. The speed of this process is constantly increasing, fueled by ever-expanding consumer demand, mass-production and low-cost pricing strategies (Fletcher, 2014). The consequences of relying upon a linear economy on a planet with finite resources are not hard to imagine and result in water and air pollution, resource degradation, loss of biodiversity, violation of human rights and increasing amounts of hazardous waste - to name a few (Cobbing & Vicaire, 2016; Qutab, 2017; Fletcher, 2014). As such, there is an urgent need for the industry to transform into more sustainable practices; socially, economically and environmentally.

Promising innovations and solutions of today come in the form of less impactful fibres and textiles, improvements in production and manufacturing technologies, retail and consumption alternatives and waste management and recycling solutions, among others. Even though these initiatives are inspiring and important, a core challenge when transitioning into sustainable practices is the industry's dependency on high-volume production and consumption of new pieces of clothing to ensure its future growth. Garments are designed, produced and sold in the same manner with little consideration to how the user

actually wishes to engage with the clothing. To drive sustainable change requires the creation of alternatives to traditional ways of engaging with fashion. In order to explore solutions of this kind, it is particularly important to understand how and why we engage with fashion and thus bring diversity into the way garments are produced, designed and retailed. Looking at nature, diverse ecosystems supports renewal and change perfectly because material and parts circulate in various speeds. Perhaps a new diverse system of fashion can emerge, one that includes multiple speeds that work in symbiosis with one another, just like nature.

Unfinished Stories is a research project that by reflecting on the concept of speed explores ideas and practices across a garment's full life cycle to find solutions aiming to create long-lasting change.

1.2 PURPOSE AND RESEARCH QUESTION

The purpose of this research project is to find leverage points where innovative ways of thinking can play a vital part in future solutions and thereby change the way we perceive the fashion industry. The project is guided by the following research question:

By understanding different desires of how clothing is used, can we envision a system where various speed cycles are optimised to their full potential through innovative solutions in design, production and retail?

1.3 RESEARCH METHODOLOGY

1.3.1 RESEARCH DESIGN

Due to the nature of this project's research objective, an exploratory research design was chosen. Exploratory research is generally used for research problems where there are few earlier studies to refer to. The aim is to generate new ideas, assumptions and develop theories or concepts. As such, findings are typically not generalizable and inhibits an ability to make definite conclusions, instead insights aim to establish research priorities, define new terms or to clarify existing concepts. Due to the interdisciplinary structure of the project and its parts, a combination of quantitative and qualitative methods was chosen. Bryman and Bell (2006) suggests that a combination of quantitative and qualitative methods helps to understand complex data and gives a more comprehensive view of the research objectives. Quantitative data was collected via a questionnaire. Discussions, interviews and a case study constitutes the qualitative data for this research.

1.3.2 INFORMATION SOURCES

The research is partly based on secondary sources including published books and online journals and articles. In addition the research is based on primary sources from discussions and interviews with players in the fashion industry. The research started with a in-depth literature review, documentation and analysis of relevant secondary sources, covering a vast spectrum of research topics - from fashion psychology through the current paradigm of economic growth and material culture to emotionally durable design and beyond.

The analyses and discussions throughout the project's various chapters draws upon several best practice examples and their potential to improve, challenge or transform the current state of the fashion industry.

1.3.3 DATA COLLECTION

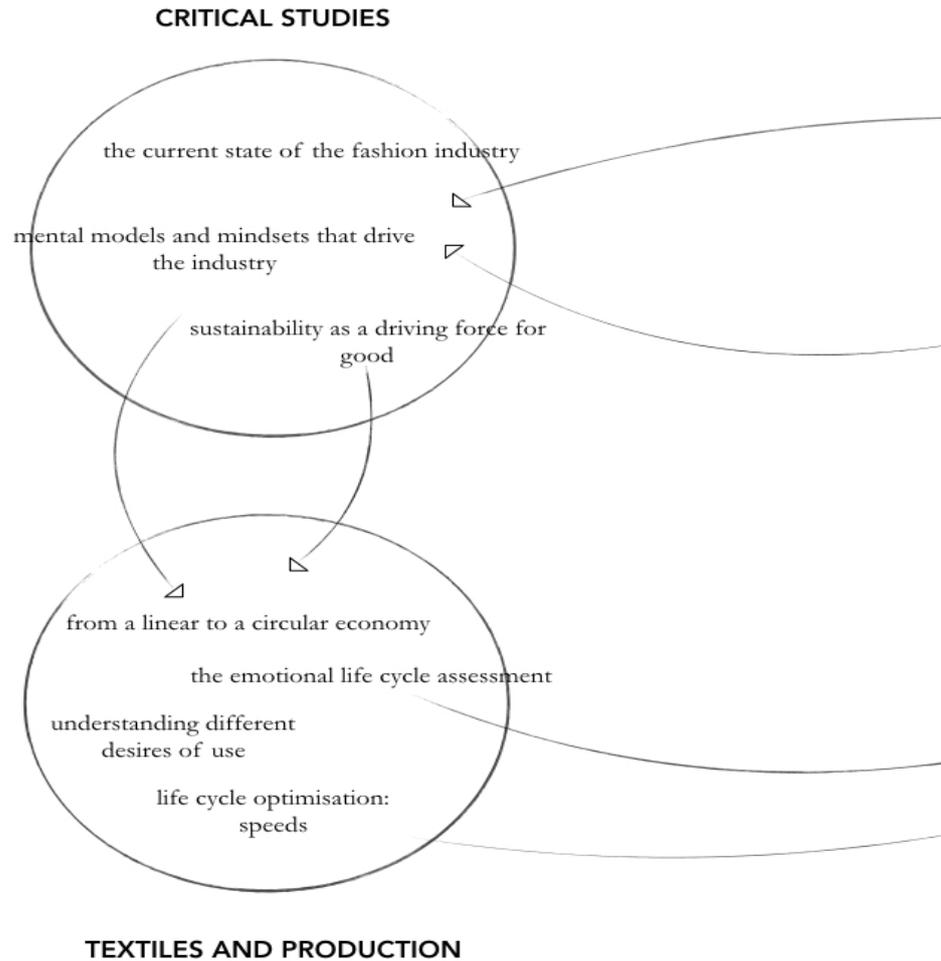
To collect data for the emotional life cycle assessment a questionnaire was chosen as method (see appendix 1). All questions were constructed based on thorough literature review as well as empirical data from a wardrobe study conducted by People People & Filippa K (2014). Pieces from the respondents wardrobes were chosen as starting points for discussion. The respondents were informed to pick pieces they liked, disliked and have kept for a long time vs a short time. In total 27 pieces of clothing were assessed.

The questionnaire is semi-quantitative, meaning that qualitative data was scaled in order to provide a numeric representation that could be compared in the further analysis. The questionnaire contains 10 questions, with a scale of 1-5 per question. Possible challenges that might affect the validity of the responses are carelessness or misunderstandings from the respondents (Bryman and Bell, 2006).

1.3.4 ANALYTICAL AND THEORETICAL FRAMEWORKS

To analyse the data and findings, some analytical and theoretical frameworks were used. To truly explore how the ideas, findings and argumentation would work in practice a single use case study was conducted based on the Business Model Canvas as the underlying analytical framework (see appendix 3). The Iceberg model, a systems thinking tool designed to help discover the patterns of behaviour, underlying structures and mental models that underlie a particular event (Goodman, 2002), was used as the theoretical framework for the Critical Studies (see 2.2). The ISO 14040 and 14044 Standards (2006) were used as a framework to conduct the life cycle assessments of the collection and to further explore the possibilities of adding an emotional level to it.

1.4 PROJECT OVERVIEW



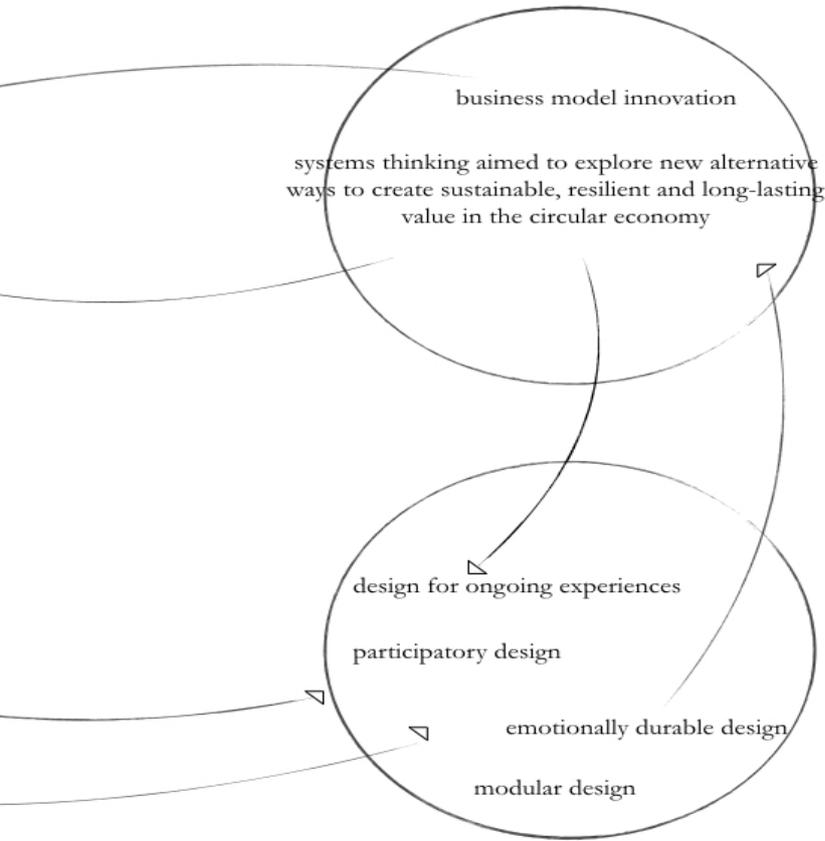
CRITICAL STUDIES

The critical studies analyzes the current state of the fashion industry in terms of the patterns, underlying structures and mental models that drive the industry. Subsequently, it explores what alternative options, solutions and strategies might look like in a fashion future. Understanding what fashion could become when sustainability is no longer a strategy for solving systems, but the driving force for good is fundamental to this study.

TEXTILES AND PRODUCTION

The textiles and production research explores the development of a concept that could be used as a complementary method when conducting a life cycle assessment on clothing. The aim is to also assess the emotional connection one has with a garment. By also assessing emotional indicators we can understand different desires of uses for garments and optimise the life cycle in terms of its material, production, design, retail and disposal.

BUSINESS AND MARKETING



DESIGN STRATEGIES

Figure 1.1

DESIGN STRATEGIES

The design strategies explores the design of garments that offer the user endless possibilities to change, update and modify one's piece throughout its life. Such a design strategy attempts to adapt to a wearer's changing needs and desires. The aim is to design garments that engage the user, resulting in reduced consumption of new pieces and a stronger emotional connection with the clothing one own.

BUSINESS AND MARKETING

The business and marketing plan explores innovative ways of how to diversify one's business model and create sustainable, resilient and lasting value in the circular economy. How the strategy, design for ongoing experiences, operates in a business and retail context is described in further detail outlining opportunities and challenges a company might encounter when integrating this strategy into its existing business.

2. CRITICAL STUDIES

Word Count: 4356

2.1 INTRODUCTION

The environmental, social and economical challenges facing the fashion industry have arisen due to ever increasing consumption combined with production processes and supply chains that in many cases are not socially and environmentally well thought-through (Fletcher, 2014; Braungart & McDonough; 2009). Although fashion is an important form of self-expression and have significant influence in society, it is one of the largest contributors to these emerging challenges, being the second largest polluting industry of today (Eco Watch, 2015).

In response to these challenges, combined with an urge to heal the fashion industry, many actions to halt environmental impact have been initiated by companies, NGOs, regulators and consumers. Examples are efficiency improvements in recycling technologies, implementation of take-back systems and exchanging materials and fibres for less impactful ones. Even though these initiatives unquestionably are promising and important, most of them target what can be regarded as the symptoms of fashion consumption and production, and not the actual root causes to the challenges we are facing. This is something many researchers argue is not enough at this point, suggesting it as “short-term solutions” hoping for fashion commerce to go on as usual while what is needed is a systems change (Fletcher, 2014; Siegle, 2012; Klein, 2014).

Jonathan Chapman (2015:1) describes today’s situation of unsustainability as follows: “human destruction of the natural world is a crisis of behaviour, not simply of energy and material. It is about people, the choices we make and the dreams we chase”.

To catalyze meaningful and long-lasting change, understanding what is causing the symptoms of fashion commerce, rather than how to treat them, is of pivotal importance in order to find leverage points for change. To fundamentally challenge the current state of the fashion industry, efforts need to target the very underlying mental models and mindsets that dictate our relationships with garments, as well as the underlying structures and economic models that drive the fashion industry today. Because ultimately, as Michael Braungart and William McDonough emphasize throughout their book *Cradle to Cradle* (2009) “doing less bad, is not good enough”.

What is the current state of the fashion industry and where can we find leverage points for change in today’s system?

2.2 SYSTEMS THINKING

To bring about the change needed to deal with the challenges facing the fashion industry, understanding why the industry behaves the way it does is essential. Systems thinking is a widely used approach with the purpose to tackle and understand how various elements within a system influence each other. Rather than focusing on parts in isolation, systems thinking focuses on interdependencies within a system, what patterns that can be seen over time and most importantly what the root causes of the problems that have arisen are (NWEI, 2015). Peter Senge, a notable writer in the area of systems thinking, describes the approach as follows “systems thinking is a way of thinking about, and a language for, describing and understanding the forces and interrelationships that shapes the behavior of systems. This discipline helps us to see how to change systems more effectively, and to act more in tune with the processes of the natural and economic world” (The Fifth Discipline, 1990).

In the fashion industry, approaching problems in the lens of systems thinking is of high importance as no parts of the industry works in isolation. This is highlighted by Kate Fletcher in the very preface of her book *Sustainable Fashion and Textiles: Design Journeys* (2014: XVI) “... yet, the whole is the problem - the cumulative values, discernments, habits of mind, industrial practices, business models, economic logic, deep societal forces and aggregated individual practices that make up the fashion and textile sector - and it is the whole we must understand before we consider the functions and needs of its elements”.

It is important that we look beyond the symptoms of fashion commerce and target the very

underlying mindsets and structures that drive the industry. Innovative materials and technologies are important, but also innovative consumers and business models that envision alternative routes and make it possible for fashion to circulate in a meaningful fashion future are equally important. As so, systems thinking is essential for driving sustainable transformation in the fashion industry.

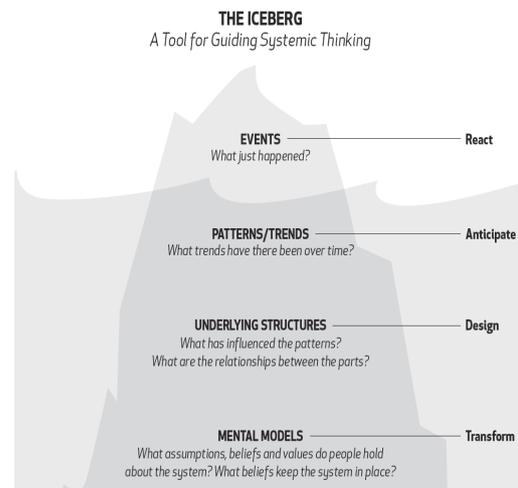


Figure 2.1

The iceberg model is a systems thinking tool designed to help discover the patterns of behaviour, underlying structures, and mental models that underlie a particular event (Fig 2.1). It holds four levels of thinking and like an iceberg only depicts a small part of the problem, while the rest is considered as unseen and hidden beneath the surface. The tool encourages to also identify the impacts of these levels in order to develop pro-active long-lasting solutions rather than re-active solutions that are healing the symptoms (Goodman, 2002). In the following sections the iceberg model will be used to understand the current state of in which the fashion industry operates today.

2.3 THE CURRENT STATE OF THE FASHION INDUSTRY

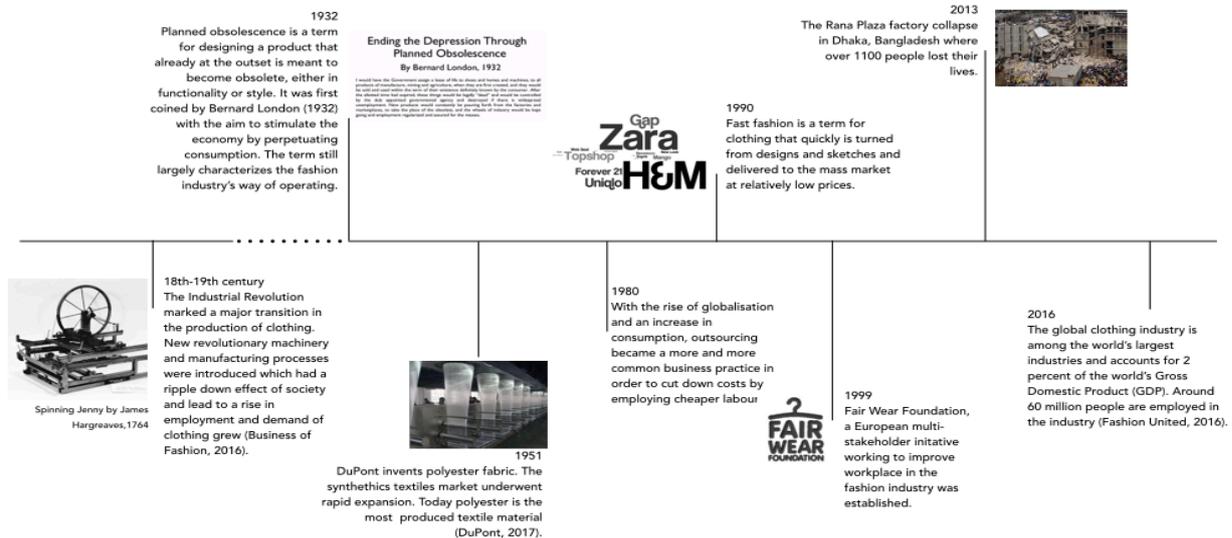


Figure 2.2

Similar to many other industries of today, the fashion industry is characterized by a ‘take-make-waste’ mentality and operates in a so called linear economy. A linear economy refers to an economic model that extracts resources from nature, makes products to last for, generally, a short amount of time, until being disposed of (Ellen McArthur Foundation, 2017). In an interview in the True Cost Movie (2015) Livia Firth explains contemporary fashion in the following way “disposable clothes that stay in a woman’s closet for an average of just five weeks, before being thrown out - all in the name of the democratization of fashion”. This way of doing business has, without doubts, been highly profitable for a few main players, but is ultimately reaching its physical limits (Fletcher, 2014).

To transform an industry so closely aligned to a linear way of production and consumption is challenging as the changes need to tackle not only how we produce fashion, but also how we interact with fashion. In order to understand the role of fashion and its interaction with the world, the changes which have occurred in the evolution of fashion commerce must be observed (Fig 2.2). The complex interconnectedness of fashion psychology, economic structures, consumerist cultures and environmental and social consequences, among other factors, are categorized within the levels of the iceberg model, aiming to understand how the industry got to where it is today.

2.3.1 EVENTS

The events of a system refers to the level of thinking at which we typically perceive the world. This means the challenges we are facing that are the easiest to identify, also known as the symptoms of a system (Goodman, 2002). The symptoms of today's fashion industry are easy to observe and have been gaining increased awareness in media, as well as among consumers, NGOs and companies over the last couple of years. The symptoms can be structured through the factors of the triple bottom line. The triple bottom line was coined by John Elkington in 1984 and incorporates three dimensions of performance: social, economical and environmental (The Economist, 2009).

Social challenges are, among others, the violation of human rights and the use of child labour in the industry. Fashion journalist and author Lucy Siegle expresses that the garment industry always has 'fed off' the labour of its most vulnerable workers (The True Cost, 2015). An example of a symptom of this kind is the Rana Plaza factory collapse that happened in 2013 where over 1100 workers lost their lives. This disastrous event has received enormous attention and initiated the global activism movement Fashion Revolution that brings people from all over the world together with the aim to "change the story for the people who make the world's clothes" (Fashion Revolution, 2017).

Economical symptoms can be seen as rising global and national inequality, declining quality and durability of clothing and unstable employment for workers. Environmental symptoms are for example growing amounts of waste, pollution, degradation of resources and toxicity (Siegle, 2012).

The symptoms of a system are relatively clear to understand and thus easier to solve but they are quite literally by-products of a much larger problem. The iceberg model emphasizes that every challenge cannot be solved by adjustment at the event level. In fact, focusing solely on this level might lead to important aspects being overlooked. By digging a little deeper, we can find other forces at play.

2.3.2 PATTERNS

The patterns of a system are the reason for the recurrence of events, which implies that an event is not an isolated incident but due to some other force (Goodman, 2002). Looking beyond the symptoms of exploitation of workers and unstable working conditions, we find that these are in large due to the pattern of outsourcing in low labour cost countries which has influenced the industry the past decades.

The need to find cheap labour has increased as competition has gotten more intense at the same time as the price of clothing has fallen. This can be described as a race-to-the-bottom situation which means that companies try to compete with each other by cutting wages and living standards for workers and the production is moved to the country where the wages are the lowest and the workers have the fewest rights (Åkerblom & Kärnstrand, 2016). This race-to-the-bottom situation has led to a high demand of flexibility for manufacturing factories or else there might be a threat of companies relocating to cheaper countries. This ultimately leads to poor working conditions and unstable employment as contracting can be made day by day, as well as the involvement of middlemen and subcontracting.

Other patterns influencing the fashion industry and pushing it into the direction of today are for example globalization, international competition and cost externalization. Cost externalization is an economic term that describes how a business maximizes its profits by off-loading indirect costs, such as environmental impacts, on a third party due to the production and manufacturing plants being located in that country (Fletcher, 2014; Klein, 2014).

2.3.3 UNDERLYING STRUCTURES

The underlying structures level refers to the systemic structures in society that are causing the patterns. According to John Gerber (2012) structures affecting a system include for example corporations, governments, laws, regulations, economic structures and habitual behaviours that in many cases are so deeply rooted that they might not be conscious.

The fashion industry, though unique in many ways, is closely aligned to the principles of consumer capitalism and exponential growth which have influenced the economy, and ultimately our way of living, the past decades (Klein, 2014). Consequently, a fast fashion business model, aiming to sell as much as possible, as fast as possible, to as many as possible, dominates the fashion industry today.

This kind of business model is based on mass-production, low cost pricing strategies and just-in-time manufacturing where designs and sketches are transformed into ready-to-wear garments in just a few weeks (Kate Fletcher, 2014). Fast fashion is characterized by a throwaway mindset and over-consumption fueled by changing trends, low

prices and planned obsolescence. The implications of relying upon such a linear way of production and consumption on a finite planet are not hard to imagine and results in resource degradation and an extensive accumulation of waste.

The way the fashion industry operates imposes great challenges on all actors of the supply chain as well as on the environment. These underlying structures are therefore causing the events and patterns previously explained. A business model that is completely dependent on growth and profit just to stay afloat ultimately needs to enforce actions such as outsourcing and source cheap labour to reduce prices even further in order to sell more pieces and increase the company's growth compared to last year. The speed of which (fast) fashion operates leaves little room for creativity. Instead universal design solutions, mass production and design homogenization have replaced the value of things (Papanek, 1971).

2.3.4 MENTAL MODELS

The mental models influencing a system are the beliefs, morals, attitudes and values that drives the underlying structures. These are beliefs that we oftentimes are subconsciously taught by friends, family and society - and which we normally don't consider we acquire (Goodman, 2002).

“Grab it now, tomorrow it might be gone forever” (H&M in-store advertising) - to buy, wear a few times, dispose and then quickly run back to the store to buy a new piece is a central message communicated by the main fast fashion players.

The meaning and significant role that fashion has played throughout history, and continuously plays in our lives is undeniable. The clothes we wear hold narratives of self-expression, identity and belonging - and are encoded with the stories of our lives.

Even though fashion still have a strong individual and societal function, some fashion psychologists deems fashion to have lost some of its meaning. Sara Forsberg and Nicole Walker describe fashion as “drowned in commercialism and homogenization” and replaced by a culture of mainstream, normcore, commoditization and materialism (Bon, 2016). The speed of which clothing is consumed today, fueled by more collections each year and a quicker turnover of trends are strong factors for decreasing the perceived value of clothing and the art that fashion once was.

According to Sommar and Helgesson (2012) it is challenging to preserve values in a world where speed is more profitable than quality. Faster trend cycles, an excess to choose from and an insatiable desire for the new is the foundation of which the mental models driving the fashion industry are based upon, and at the same time as our closets are growing, the rate of disposal is increasing.

Jonathan Chapman (2015) states that “the limited presence of meaning and empathy in so many commodity fashion products, combined with their low cost and ease of purchase, is a key factor in their being discarded long before they are worn out”. He continues by expressing that “we no longer know the makers, or the source of the materials; they no longer speak of our myths, communities or societies”.

The way the supply chain of fashion operates today separates the users from the makers which leads to distance externalization and separates consumers from the true impacts that fashion consumption inflicts on people and the planet.



Figure 2.3

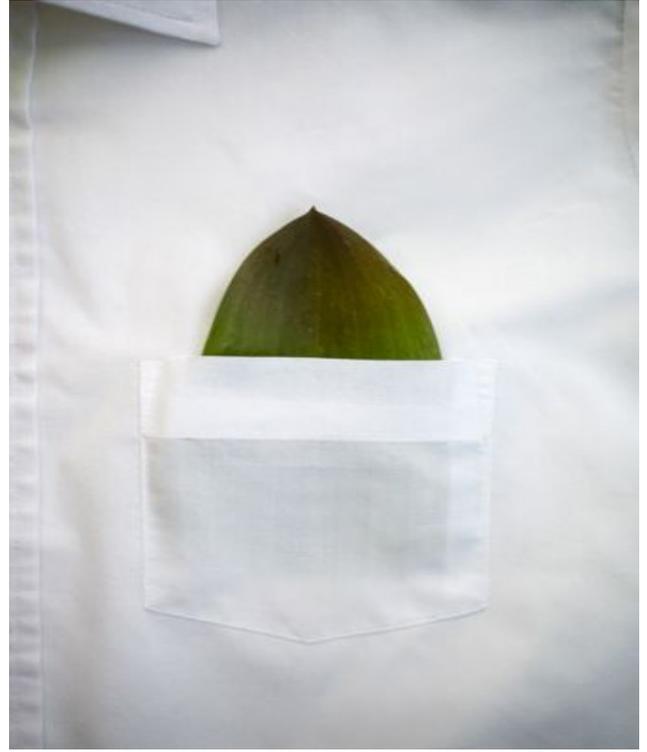


Figure 2.4

2.4 FASHION FUTURES

Transitioning towards a sustainable fashion future requires the exploration of alternative design solutions and future business strategies that challenge contemporary assumptions of what fashion is and what it could become. Even though it is quite clear what is broken in the current state of the fashion industry when examining it in a systems thinking lense, is it difficult to find routes for change. Especially when the biggest challenge of today lies in exploring sustainability as a driving force for good that impacts at all levels of the iceberg, not just as a way to solve symptoms.

The obvious solution to the challenges facing the industry would be to slow down fashion cycles. If the cycles were slowed down, consumerism and production would consequently follow, which would

leave room for improved working conditions, generation of less waste etc. Although, as the industry is dependent almost solely on selling new pieces of clothing for financial success, just to stay afloat, many players in the industry looks for other innovative ways to ‘sustainabl-ify’ their supply chains.

There are many inspiring companies, designers and initiatives today challenging the current state of the industry. The following sections will explore concepts and initiatives that aims at transforming the system at different levels of the iceberg model. The aim is to find leverage points for change, where new innovative ways of thinking can play a vital part in future solution and thereby change the way we perceive the fashion industry as a whole and hopefully ultimately the way we consume fashion.

2.4.1 EVENTS

The event level, the symptoms of fashion production and consumption, are unquestionably the challenges facing the industry that are the best understood and have therefore been targeted the most by players in the industry.

Take-back systems have been implemented in order to reduce the tons of waste generated by contemporary fashion commerce. Efficiency improvements in recycling technologies are investigated aiming for garments and textiles to be reused and thus recirculate as many times as possible in society. There are many exciting innovations in fibres in order to create less impactful textiles. These include for example bionic, a textile fibre made from recovered ocean plastic and fibres made from food waste from soy, banana and pineapple industries (Fletcher, 2014; Bionic, 2016).

To tackle the social challenges facing the supply chain of the fashion industry, improving working conditions as well as ensuring transparency of practices is of vital importance. Companies such as Everlane, Patagonia and Honest By provide transparent supply chain information on all their pieces of clothing. Additionally, there are many industry standards used by an increasing amount of companies to ensure organic and fairtrade materials or the use of less impactful manufacturing processes that reduce resource inputs and pollution outputs such as Oeko-Tex and GOTS (Fletcher, 2014; Global Organic Textile Standard, 2017). These are all inspiring initiatives proving that companies and consumers have the will to transition into a more sustainable fashion future. Even so, they are all starting points to addressing the deeper structures, mindsets and mental models that drive the industry.

2.4.2 PATTERNS

The key challenge when targeting the patterns that drives the symptoms is to realize, and most importantly to accept, that there are limits on a finite planet. This is becoming more obvious as the prices of virgin resources are increasing at the same time as we are approaching peak oil as well as peak cotton. Peak oil and peak cotton refers to a time when the maximum rate of extraction is reached and after which the rate of extraction is to decline (Braungart and McDonough, 2009).

To change the course of these patterns, one solution is to aim for closed loop production systems. A closed loop production system is described as a system that “does not exchange matter with the outside world” (Sustainable Plant, 2017). Loops may be closed by either recycling, reuse or recovering of all used material. Michael Braungart (2009) argues that closed loop systems would reduce the need for virgin resources, while satisfying the need for new resources. This implies that materials and textiles would circulate in society, as opposed to today’s linear way of production and consumption.

Closed loop systems should be accompanied by solutions and innovations in design strategies that prolongs or optimises a garments life cycle and facilitates for closed loop systems. Such as design for longevity, design for recyclability, design for reuse or design for multiple users and life cycles.

2.4.3 UNDERLYING STRUCTURES

The underlying structures that drive the industry is undoubtedly a very complex system in large based on the current paradigm of economic growth. Considering the challenges this has brought such as rising inequality, resource degradation and exploitation of workers - it is difficult to understand why an economic model that has clearly outlived its purpose, is seen as the only way forward. With this being said, to discuss the fundamental belief of infinite growth on a finite planet is a question larger than the frame of this (or any) research. However, aiming for a fully circular economy, is undoubtedly a promising idea.

A vital part in enabling more sustainable production and consumption, is to develop a new paradigm where innovative business models and strategies will challenge the ones dominating the current market. Today, the fashion industry is relying on almost only one source of revenue, that is the sell of new clothing. By improved infrastructure for reusing and reselling, garments could circulate in society and have multiple life cycles instead of one (Pedersen & Gardetti, 2015).

Another solution to challenge the underlying structures is the concept of products as services, which is gaining increased attention. Products as services is a business model that is aiming to create products that throughout their life can be updated or restored. Ultimately this would lead to products that act as more than just a product, which hopefully means stronger emotional connection with the user and thus increased life spans. This strategy is probably most distinct in the mobile industry, where a phone is everything within it and the thrill lies in what it can do, rather than what it

physically is. Niinimäki (2014) explains that products as services may “provide a key conduit for revenue generation as well as value creation for a new business model that does not create environmental poverty”. These systems might require the consumer to be included in the process of making the garment by participation, engagement and co-creation.

Ultimately, new innovations, ideas and businesses leads to a more diverse ecosystem of players which makes the underlying structures more agile when facing new challenges.

2.4.4 MENTAL MODELS

The mental models driving the industry are undoubtedly the most challenging level to understand and target. The beliefs, opinions and values we have are so deeply rooted in our lives, that they can be hard to even notice by oneself. We are mindlessly following our old routes and paths. The speed and accessibility of clothing today funnels us towards comfortability and a search for the easiest and fastest, rather than the most meaningful. Swedish fashion brand Asket (2017) aims to target the mindsets by only offering one permanent collection of clothing, a business model they call Essentially Different. They explain their concept by saying “Essentials, the pieces we love and use the most, have one thing in common - they’re timeless. Not in or out of fashion. So we’ve chosen to disregard seasonal collections, and put all our focus on building a permanent wardrobe. Instead of starting from scratch every season, we can build upon our experience, listen to our customers and incrementally improve each garment over time”.

A meaningful fashion future in terms of the mental models driving it would in short be a future in which the consumer find meaning with clothing beyond its physical function. Emotionally durable design is a design concept that is aiming to challenge the way we relate to the material culture.

Jonathan Chapman (2015) is a sustainable design theorist who seeks to explore and understand our engagement with things, and why we decide to hold on to certain objects for years while we decide to throw away others after just a couple of uses. He presents strategies of how to design products that are not only sustainable and durable, but that also prolongs the relationship with the user and thereof pioneers a more hopeful, meaningful and resilient form of material culture. Chapman (2015:39) states that we are consumers of “meaning not matter” and stresses the need for this notion to be more present in our everyday purchasing decisions. Furthermore he describes that a product is generally not thrown away due to the fact that it is broken, it is thrown away simply because the user have lost interest in it or as he explains it “waste is a symptom of expired empathy, a kind of failed relationship that leads to the dumping of one by the other” (Chapman, 2015:61). Using strategies that increases the emotional connection to clothing could bring identity, personality and new value to them.

Lucy Siegle, author of *To die for - is fashion wearing out the world* (2012), explains her motivation to promote a thirty-time wear rule implying that “if you do not have the will to wear the piece more than thirty times - do not buy it”. Thirty wears might not seem that much, but in a world where our

engagement with clothing is characterized by short-term wear and disposability - thirty times is a fundamental shift in the mental models and mindsets.

To begin building resilience and meaning into the relationships of clothing is essential. Ways in which design strategies explore solutions where clothing can act as more than just the clothes we wear and instead act as platforms for self-expression, creativity and identity creation. Using strategies that let garments change and adapt over time, and because of this, maintain the interest of the user is one solution for achieving a fashion future where meaningfulness is brought back to clothing.

2.5 BRIDGING THE PARADIGMS

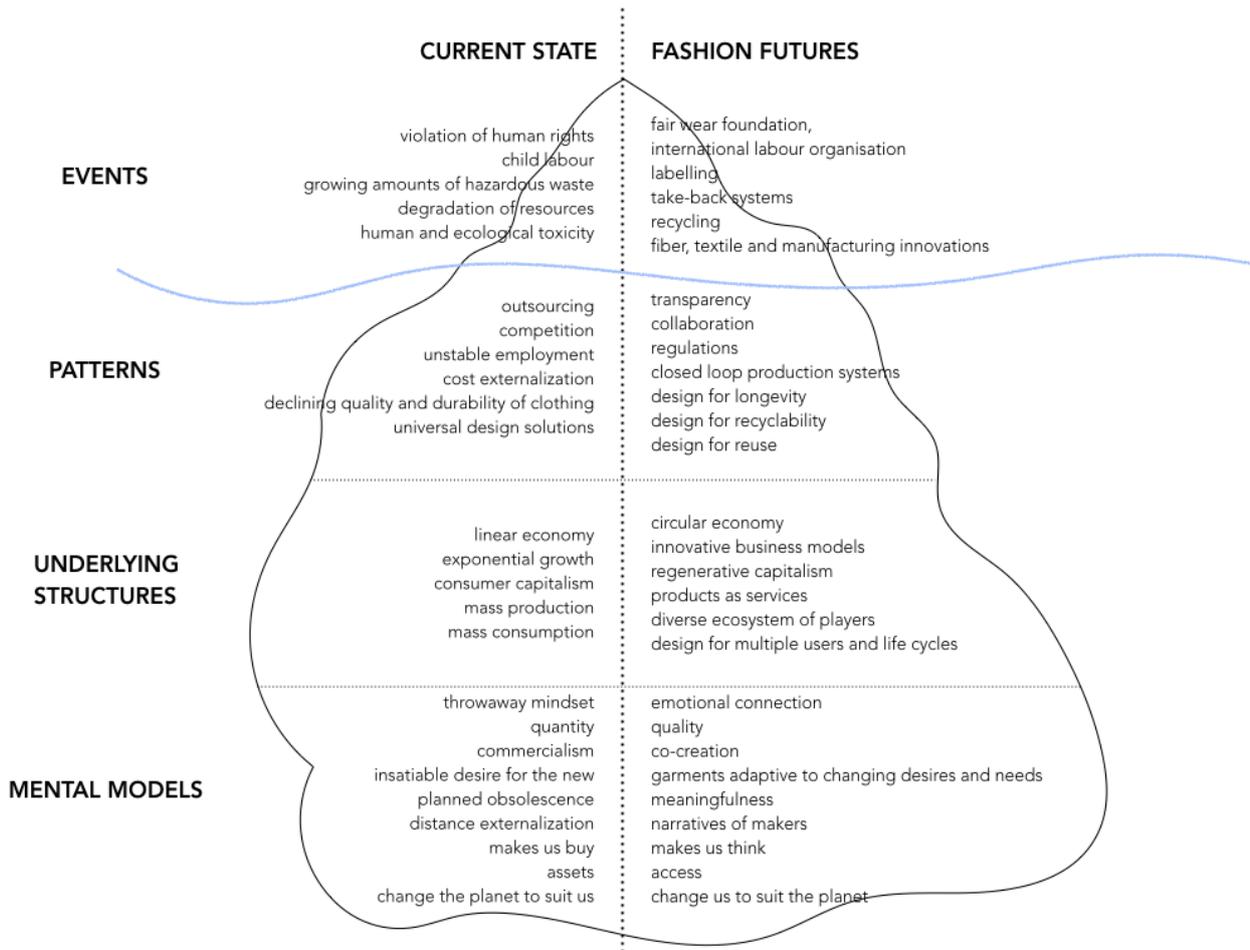


Figure 2.5

2.6 CONCLUSION

The fashion industry is a complex system of interdependencies from a broad spectrum of activities influencing it, from psychology, economic structures, consumer behaviour to ecological limits and beyond. To create long-lasting and impactful change for the industry, it is essential to understand all levels influencing today's system. From the symptoms that can be seen, to the very underlying mental models and mindsets that drive the industry. It is only from this understanding that we will be able to identify the most appropriate leverage points to affect change within the system.

The central driver of today's mindless consumption patterns and mindsets is the speed of which clothing is consumed, fueled by quicker turnover of trends that feeds into and encourages a throw-away mindset. Consumers have gotten used to having fashion fast, convenient and, above all, often. Another reason might be the daunting complexity of the fashion supply chain resulting in the fact that users today are so removed from the makers. This distances consumers from the true impacts on both people and the planet. In short, out of sight, out of mind. This might help to understand the fact that most people are truly aware of the impacts of fashion commerce and the symptoms this leads to but still unwilling to change their consumption habits.

Transitioning into a meaningful fashion future is not only about creating pieces that last, but more importantly to create pieces we desire to keep. As the speed of fashion trends and styles have increased and become widely accessible, our hunger for the new has grown and lies deep within us influencing the mental models. Accepting this fact, design and retail solutions that satisfies this insa-

table desire for the new can propose sustainable systems.

The following research will explore solutions of this kind. In order to do so, it is vital to understand how and why users desires to engage with their clothing. A method of assessing emotional connection, in the context of life cycle assessments, will be proposed in the following chapter.

3. TEXTILES AND PRODUCTION

Word Count: 4206

3.1 INTRODUCTION

The fashion industry is considered one of the most harmful industries of today with disastrous environmental impact as a result (Cobbing & Vicaire, 2016; Qutab, 2017). The many stages of a garment's life cycle, starting at fibre cultivation through to disposing of the garment, cause environmental impact. A life cycle assessment is a quantitative measurement tool commonly used to accomplish a comprehensive view of a product by examining the overall environmental impact through all stages of its life cycle (Choudhury, 2014). Results of an LCA study provide a holistic understanding of a garment's environmental impact and informs actors in all stages of the supply chain so they can lead their efforts in the right, or most critical direction to reduce impacts.

In recent years increased attention has been given to the significant importance of an end user's behaviour in order to achieve a sustainable future (Levi Strauss, 2015; Fletcher, 2014; McKenzie-Mohr, 2011). To remodel the industry into more sustainable practices involves creation of design, production and retail solutions that foster sustainable behaviour. Alongside discussion on the need to promote sustainable behaviour, is growing interest for understanding how to create garments to fit for different desires of uses, rather than products that are designed to fit the desires linked to contemporary consumption.

In order to explore solutions of this kind, it is critical to understand the emotional connection that underpins our relationships with clothing and ultimately affect how we engage with it; how we wish to use our pieces, how often we replace them and if and when we decide to dispose them.

To get a comprehensive view of the use phase involves to develop methods to assess the desirability of use, influenced by the engagement, appreciation and satisfaction a user shares with one's piece. There is large potential for such a method to become a useful complement for life cycle assessments. The knowledge can be of pivotal importance when making decisions in the material, design, production and retail phase of a garment in order to ultimately create garments to fit different desires of use.

By assessing and understanding the emotional connection that forms our relationships with garments, can we optimise different phases of its life cycle?

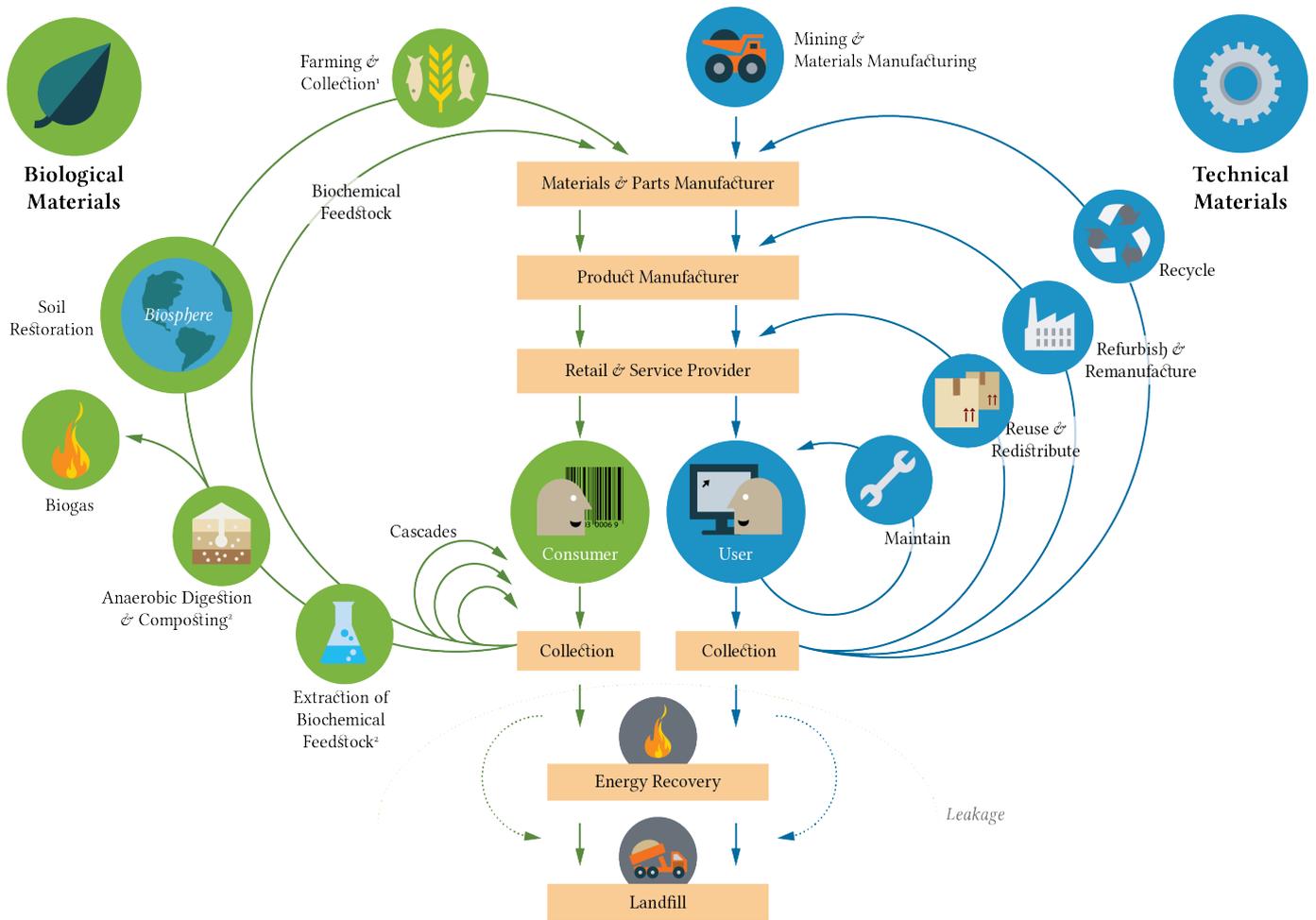


Figure 3.1
Circular Economy System Diagram
 The system diagram illustrates the continuous flow of technical and biological materials through the 'value circle'.

Source: Ellen MacArthur Foundation (2017)

3.2 FROM A LINEAR ECONOMY TO A CIRCULAR ECONOMY

Currently, the fashion industry follows a linear way of production and consumption with little regard for the environmental consequences it imposes such as growing accumulation of hazardous waste, pollution and degradation of resources. To battle these consequences many actors within the industry strive towards a circular economy. A circular economy is by the Ellen MacArthur Foundation (2017) described as "restorative and regenerative by design and aims to keep products, components and materials at their highest utility and value at all time". Circular fashion, based on the main principles of sustainability and circular economy, is a term for fashion that occurs in cycles, aiming to let no material go to waste.

Anna Brismar (2017) defines the term as follows "circular fashion can be defined as clothes, shoes or accessories that are designed, sourced, produced and provided with the intention to be used and circulate responsibly and effectively in society for as long as possible in their most valuable form and hereafter return safely to the biosphere when no longer of human use". Strategies for transitioning into a circular industry include producing garments that are either compostable or recyclable, so all materials and parts can be recovered, reused and regenerated. It also involves creating systems where garments can circulate as many times as possible among various users.

A circular fashion industry is by all means a promising and inspiring vision but far from how the industry operates today. A core challenge to battle when transitioning into circular practices is the industry's dependency on high-volume production and consumption, characterized by short-term use

and disposal of more and more pieces (Fletcher, 2014; Siegle, 2012). Increased attention has been given to the impact that occurs during the use phase as user behaviour is of significant importance for a garment's environmental impact (Levi Strauss, 2015; Fletcher, 2014). The impact of the use phase relates to activities such as washing, drying and ironing practices as well as mending, replacing and disposing behaviours. Ultimately, the user is the one who decides on a garments life span - if it's actively used, kept in the back of a wardrobe or disposed of shortly after purchase. Research by WRAP (2015:6) show that "increasing the active life of all clothing by nine months would reduce the annual carbon, water and waste footprints by 15-30 % each". This can be argued to demonstrate that a user's desirability for using a garment is of as high value to measure as the environmental performance. To explore methods to assess the use phase is therefore needed.

3.3 LIFE CYCLE ASSESSMENT

A life cycle assessment (LCA) is a common method used to quantify and evaluate environmental impact associated with a garment's life cycle (Choudhury, 2014; Beton, Dias, Farrant, Gibon & Le Guern, 2014; Roos, 2016). A garment's life cycle (Fig. 3.2) includes all phases from raw material extraction to fibre production, yarn spinning, fabric production, wet treatment, finishings, manufacturing, transportation, distribution and retail, to use and end of life treatment (Roos, 2016). The method holds a holistic perspective and instead of focusing on one environmental concern it includes various environmental indicators. These indicators are for example consumption of water and energy, human and ecological toxicity, urban land occupation and resource depletion (Beton et al, 2014).

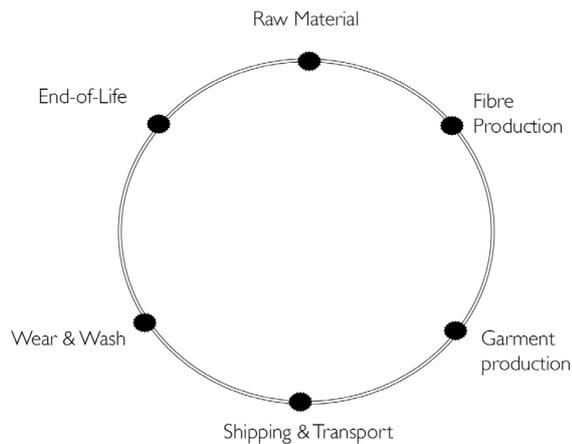


Figure 3.2

The ISO 14040 and 14044 (ISO, 2006a, 2006b) are international standards for environmental management and life cycle assessment. The standards describe the framework and principles of conducting a life cycle assessment, as seen in Fig 3.3, and identifies four phases to carry it out within:

- Goal and scope definition - description of the study's aim and purpose, to whom and for what the results are intended as well as definitions of the functional unit, system boundaries and chosen impact indicators.
- Life cycle inventory analysis (LCI) - collection of data from the chosen impact indicators and tracking all inventory flows such as inputs of water, energy and raw material and outputs such as releases into air, land and water.
- Life cycle impact assessment (LCIA) - evaluation of the inventory flows data for their environmental impact by classifying and characterizing the indicators.
- Interpretation of results - identification, interpretation, comparison and reflection over the information provided from the assessment, based on the results and outcomes given from the LCI and LCIA.

The results of an LCA study provide a holistic understanding of a garment's environmental impact and informs actors in all stages of the supply chain so they can lead their efforts in the right, or most critical direction to reduce impact. Additionally, the results can be used for product development and improvement, strategic planning of the production and supply chain as well as for marketing, education and consumer care (Levi Strauss, 2015).

Even though the method holds a holistic and extensive perspective, it has some drawbacks. For example, some important factors such as social or emotional impacts are difficult to convert into numbers and quantify. To also assess the use phase in terms of the appreciation and emotional connection one share with clothing would add an extra dimension of analysis, and provide an understanding of how the end user desire to engage with their pieces.

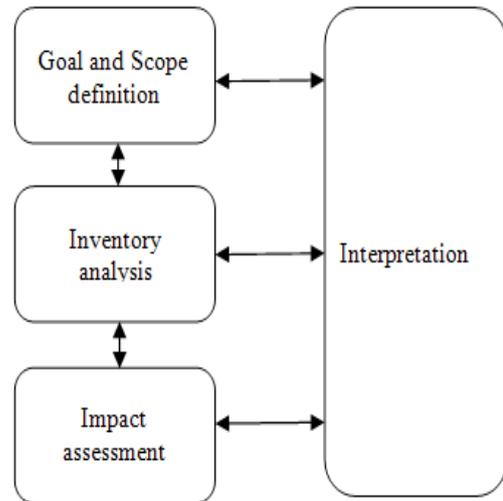


Figure 3.3

3.4 EMOTIONAL LIFE CYCLE ASSESSMENT

3.4.1 METHOD

To start exploring how to assess emotional connection influencing the use phase requires thorough understanding of the very underlying psychological and social dimensions to why and how we engage with fashion. Some pieces are actively used over years, while some are thrown away after only a few uses. Certain pieces are handed down among generations or shared between friends, while others are left in the back of a closet never to see the day of light (Spivack, 2014). Why do we decide to hold on to certain pieces, while letting go of others? Why do we value some pieces higher than others? What emotions determine our feelings when wearing a certain piece? How do we begin to collect data related to emotional connection during the use phase? How can this data be used and reflected in a LCA result?

The proposed method below, in line with ISO 14040 and 14044, presents key elements to consider when assessing environmental impact reflecting emotional indicators. Due to the lack of methods for assessing emotional indicators, this study explores a concept of how a research of this kind can be carried out.

3.4.2 GOAL AND SCOPE

The goal of this study is to explore key indicators that influence the emotional connection with one's piece. The motivation of assessing emotional indicators comes from the argumentation that life cycle assessments only reflect environmental impacts. For life cycle assessments, the use phase of a product is generally calculated as a similar functional unit, for example "one hour of use" or "one wear". This might be misleading in respect

to emotions, as appreciation of use also depends on other aspects than purely a functional hour of use. To be able to state whether a garment has an "acceptable" impact or not, the gained benefits of using the garment need to be taken into account. In addition to the actual functionality of wearing a piece for an hour, or for one occasion, are there factors that characterize the use of this hour such as pride, joy, comfort, happiness and thus affect the desired use. On the contrary, factors such as feeling unsafe, uncomfortable would affect the desired use negatively. Ultimately, these are characteristics that influence how an end user engages with their clothing. In relation to this argumentation, the functional unit is described as: one appreciated hour of use (as a complement to one hour of use). The results of the assessment will be further used in this research project to explore design, use and retail-solutions that meet different desires of use.

Owing to above research, a set of two impact indicators have been selected. By nature, emotional indicators influencing how we engage with clothing are subjective, complex and difficult to generalize. For the sake of this study and the scope of the research, definitions have been made upon generalisation. The chosen indicators are related to contemporary ways of engaging with fashion. They are based upon the dominating paradigms of fashion consumption in terms of fast and slow consumption (see 2.3) that dominates our engagement with fashion. This research is limited to the use of two indicators:

- Slow Fashion Indicators (parameters)
- Fast Fashion Indicators (parameters)

Characteristics of a slow approach are according to Carl Honoré, author of *In Praise of Slowness* (2005), to ensure quality production, give value to the product and contemplate the connection with the environment. Slow fashion is about slowing down consumption, enhancing diversity in materials, design and production, respecting people, maintaining classic and simplistic quality that contribute to longevity of garments (Dickson, Cataldi & Grover, 2016). According to the theory of emotionally durable design a user's emotional connection to one's garment is related to the garment's narrative; how and when it was acquired, the possibility of the garment to physically age well, the information it contains and the meaning it conveys (Chapman, 2015).

Alongside is the dominating paradigm of fast fashion, often (with all rights) portrayed as the "dark side" of fashion and sustainability. The desires and emotional drivers of fast fashion are equally as important to acknowledge and thus measure, as this is a dominating way of engaging with fashion today. Characteristics of fast fashion are short-term use, expression, uniqueness, conformity and the possibility to reinvent oneself and having garments a creative outlet to experiment with colours, shapes and materials (Saricam & Erdumlu, 2016).

3.4.3 LIFE CYCLE INVENTORY ANALYSIS

To collect relevant data to reflect the chosen indicators and a garment's appreciated hour of use key factors relating to emotional connection during the use phase were explored in order to create a questionnaire. The questionnaire is

based on above theoretical reasoning in combination with a wardrobe study conducted by People People for Filippa K (2014). The purpose of the wardrobe study was to understand what reasons, behaviours and values that influence a user's relationships with their pieces. Desirability was defined by the following concepts: easy to combine, very comfortable, works for many occasions, precious, usually black, basic with something extra, practical, a treat and an old friend. Furthermore, desirability was divided in three categories: used often, used occasionally and museum garments.

Due to the vast number of potential indicators as well as the different interpretations for users, the chosen indicators are defined by a set of five questions each (scale 1-5), clearly explained to the respondents. The numerical representation of the assessment is in relation to the clothings appreciation - the higher the appreciation, the higher the score. The questionnaire is semi-quantitative, meaning it is based on categorizing and scaling qualitative data in a scoring system in order to receive one numerical representation that in further analysis could be compared in relation to the functional unit. See appendix. 1 for questionnaire and results.



Figure 3.4
Wardrobe study conducted by People People for Filippa K (2014)



Figure 3.5

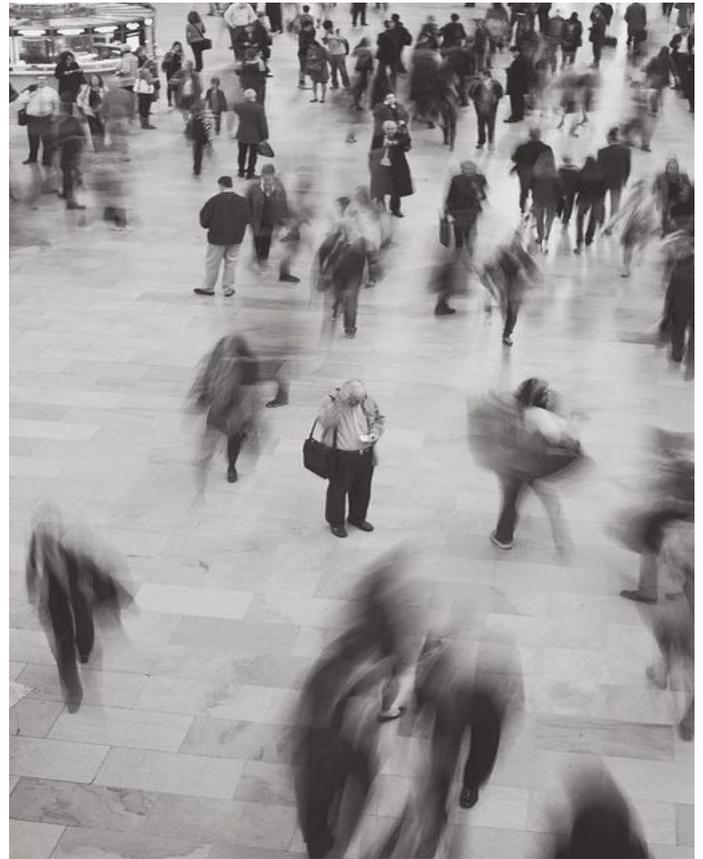


Figure 3.6

3.4.4 LIFE CYCLE IMPACT ASSESSMENT

The outcome of the inventory analysis is one numerical result, based on adding the result of the appreciated hour per use and the hour of use. The data is modified from internal reports life cycle assessment reports conducted by Mistra Future Fashion. The following results refer to the collection made for this research project (see 4.5). The data for the LCA is modified from internal life cycle assessment reports conducted by Mistra Future Fashion.

The LCA data is taken from existing databases for LCA (Ecoinvent 3), from literature and Swerea IVF's own database. The LCA software SimaPro 8.3.0.0 (PRé Consultants, 2014) has been used for the calculations. The life cycle impact assessment (LCIA) method used in SimaPro is the ILCD 2011 Midpoint Method (European Commission, 2011) as implemented in SimaPro for climate change.

In this simplified LCA, the garments are modelled after the Bill of Material (BOM), see Table 3.2. For the wool coat, production in Italy is assumed. For the silk garments, production in India is assumed. All other data is generic data from Roos et al (2015).

The concept of “appreciated hours of use” is seen in Table 3.1 For the garments, different use scenarios were set up:

- Wool coat: 500 hours of use is expected, e.g. 1 hours of use per day for 50 days a year for 10 years.
- Silk pants: 300 hours of use is expected, e.g. 10 hours of use per day for 30 days during 2 years.
- Silk dress: 80 hours of use is expected, e.g. 8 hours of use per day for 10 days during 5 years.

	Meaning	Formula
Normal appreciation	1 hour of appreciated use per used hour	actual hours x 1
Max appreciation	2 hours of appreciated use per used hour	actual hours x 1/2
Case appreciation	n hours of appreciated use per used hour	actual hours x 1/n

Table 3.1 Hours of use

	Wool coat	Pants	Dress
Textile material	100 % wool	100 % organic peace silk	100 % organic peace silk
Used amount (metres)	1.8 m x 1.4 m	1.5 m x 1.2 m	3 m x 1.2 m
Fabric Weight (g / sqm)	500 g / sqm	80 g / sqm	80 g / sqm
Geography	Italy	India (Cocoon)	India (Cocoon)
Other material	-	Elastan 3.5 cm x 80 cm	-
Production	End-of-roll fabric	Handspun, handwoven	Handspun, handwoven
Colour	Dark grey	Natural white	Natural white
Eco label	-	Organic peace silk (EU regulation 834 / 2007)	Organic peace silk (EU regulation 834 / 2007)
Finish	Superwash		

Table 3.2
Bill of Material M.A Collection

Figure 3.7 shows the results for climate change for the garments using different functional unit. The total global warming potential (GWP) for the life cycle of the garments varies depending on the functional unit.

Figures 3.8 and 3.9 show the contribution from the different parts of the life cycle of the wool coat and the silk pants respectively. The wool production dominates the GWP (100 years) much depending on the methane emissions from the sheep farming. With a longer timeline, the biobased emissions from sheep farming would be reduced essentially, though GWP 100 is the most commonly used method for calculating climate change.

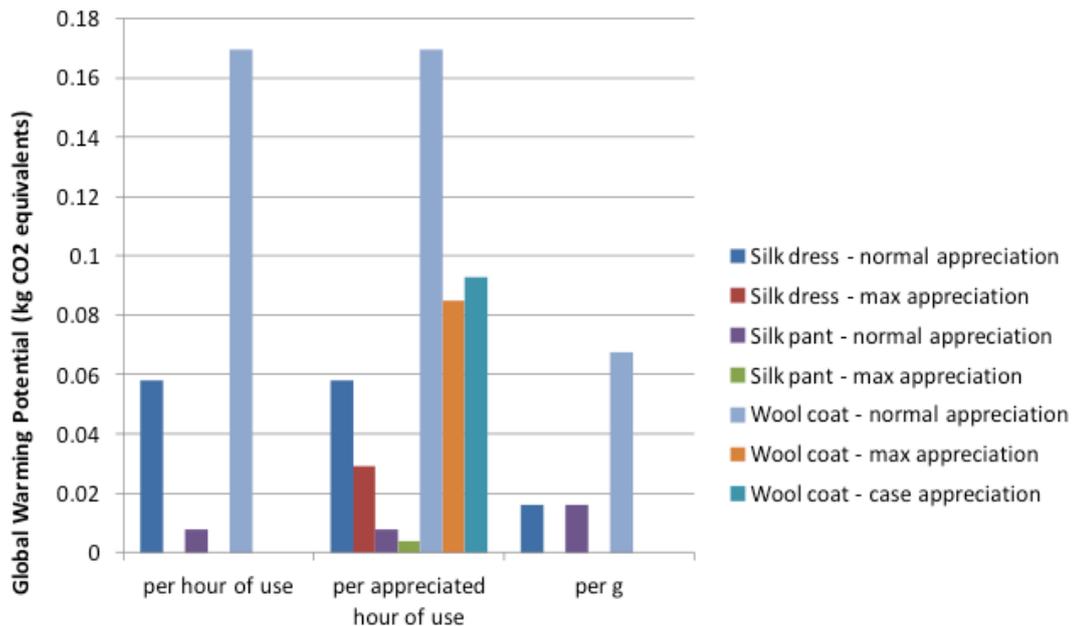


Figure 3.7
Climate change potential in kg carbon dioxide equivalents

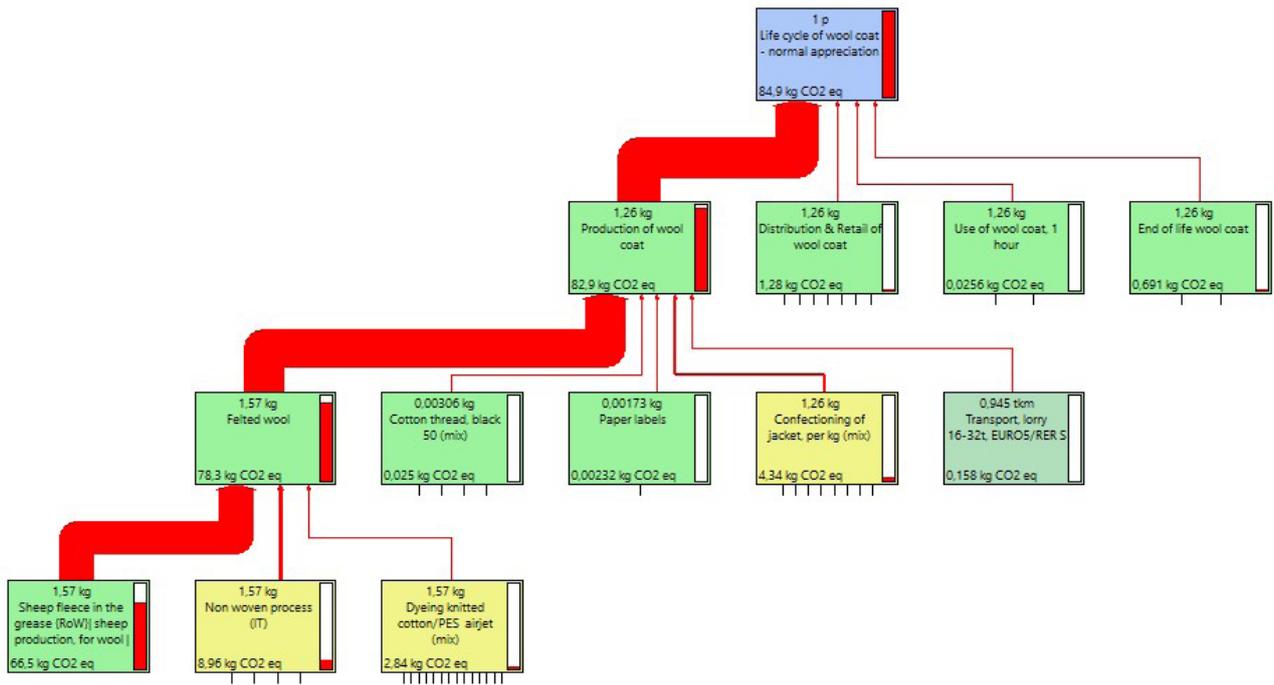


Figure 3.8
Contribution to GWP for different life cycle steps of wool coat

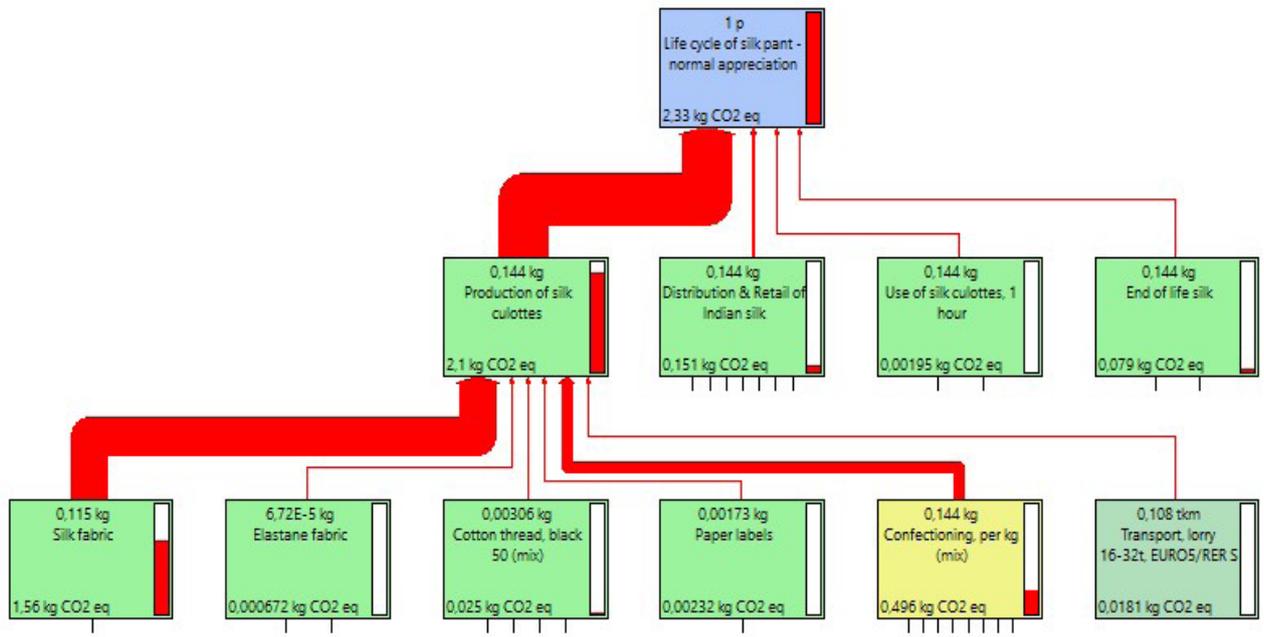


Figure 3.9
Contribution to GWP for different life cycle steps of silk pants

3.4.5 INTERPRETATION OF RESULTS

Including an assessment of the appreciated hour of use provides complementary information to an environmental life cycle assessment. It gives a more comprehensive view of a garment's impact, and adds additional dimensions for decision making in order to optimise a garment's life cycle. The following analysis and interpretation of results is based on above theoretical and empirical findings and discusses the question: *what makes the difference?* Solutions and recommendations of how to design, retail and use garments are based upon the findings of the emotional life cycle assessment (see appendix 1 and 2 for results).

3.5 WHAT MAKES THE DIFFERENCE?

3.5.1 MATERIAL

Choosing material for a garment highly impacts decisions in the other phases of the life cycle. Sustainability challenges related to the choice of material are dependent on the textile fibre chosen. The results from the emotional life cycle assessment indicate that materials are of significant importance for the connection to one's garment and impacts how the garment is used.

The garments that scored the highest in regards to slow fashion parameters were of high-quality and oftentimes in natural materials such as wool and silk, materials seen as high value in society. Both wool and silk foster sustainable behaviour as they simply can be cleaned by being hung outside in the air, which reduces environmental impact from washing and drying practices. In addition, as they are seen as 'high-value/high quality' fabrics they are generally mended and well taken care of which prolongs the life span and use.

Garments that scored low on the other hand, and thus are desired to engage with fast, can be made in materials that are short-lasting, having them circulate fast before being fully recyclable or reused in parts. For these garments innovations in materials, recycling technologies and biodegradability can be of high importance in order to also have sustainable fast speed systems of clothing and textiles. If a user lacks the desire to keep the garment, there's no point designing longevity into it and rather it can be made already at the outset with materials that facilitates a fast life cycle.

3.5.2 DESIGN AND PRODUCTION

Design strategies can challenge current unsustainable behaviours by proposing alternatives to contemporary engagement of clothing, which in turn might lead to reduction of a garment's environmental impact. Key outtakes from the emotional life cycle assessment show that the pieces we tend to hold onto for longer are made in timeless design, with simplistic shapes and neutral colours.

Design strategies for longevity are for example emotionally durable design, modular design and participatory design which fosters stronger emotional connection by engagement with one's piece. A dominant factor resulting in high appreciation was knowing the garment's narrative; where it was made, by whom and in what material. Promoting transparency of the supply chain could lead to significant improvements in the consumption and production phase of a garment. Production techniques that facilitates for slow speed systems of garments might be handcraft techniques, quality manufacturing and adaptable design that prolong the life cycle and builds on its narrative.

On the contrary, garments that aren't desired to keep for a long time are trend-driven pieces expected to become outdated in only a few weeks. Even though a user might not wish to keep the garment, the piece is important in order to update one's wardrobe and look. Trend-driven garments can be made with design strategies and production solutions that facilitate reuse or redesign of the piece, so that the style can be updated instead of becoming obsolete. These design strategies can be to create pieces in colours easy to re-dye or in shapes easy to recut so that the garment already at the outset is prepared for several life cycles.

Design to change material systems and production techniques to facilitate for fast speed use should be explored. If garments can be mass disposed in a healthy system by recycling or biodegrading, then maybe they can also be mass produced by innovative techniques such as 3D production, closed loop systems and zero waste strategies.

are many ways for a user to dispose of one's garment. To promote behaviour of reusing, repairing and recycling enhances the lifespan of clothing and drastically reduces environmental impact. Ensuring all parts used to be fully biodegradable or recyclable will ensure closed loop and circular systems, where no material goes to waste.

3.5.3 RETAIL AND END-OF-LIFE

To create systems where users can engage with garments differently and in different speeds, exploring alternatives to current retail of clothing is essential. Today the industry almost exclusively profits from selling new pieces of clothing. To find ways for fashion to circulate among many users could be a retail solution in order to foster sustainable use of garments desired to keep for a short amount of time.

Collaborative consumption, sharing economy, reusing and reselling alternatives are innovative alternatives to current consumption. Strategies of this kind might extend a garment's service life and thus decrease consumption of new pieces for users as there are other options of how to engage with clothing. This implies that emotional connection does not only come from having a garment for a long time, but also from having it only a short amount of time and thus appreciate it more knowing the use phase is limited.

For garments intended to be everyday wear, educating about maintenance activities such as washing, repairing and caring behaviours are key to ensure the longest possible life cycle. There

“Vain trifles as they seem, clothes have, they say, more important offices than to merely keep us warm. They change our view of the world and the world’s view of us” (Virginia Woolf, Orlando, 1928)

3.6 DRAFT OF A PRACTICABLE MODEL TO REALIZE: LIFE CYCLE OPTIMISATION

Systems thinking designed to maximise a garments in nite value regardless of the speed it travels.

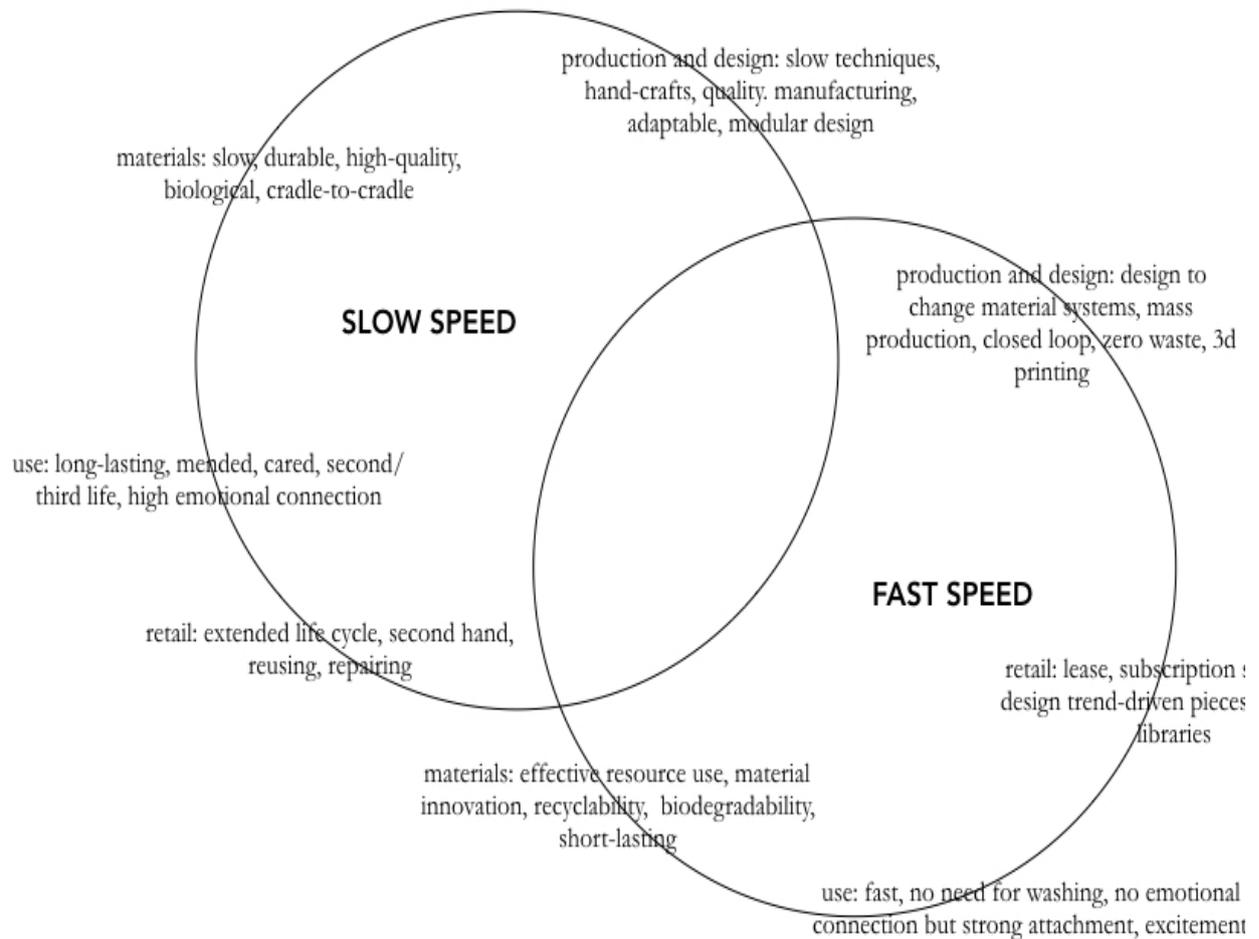


Figure 3.10



Figure 3.11



Figure 3.12

3.7 INDIVIDUAL DEFINITIONS

Based upon the previous theoretical and empirical data, individual definitions of sustainability are presented below. These definitions have been used as guidelines when creating the collection for this research project.

3.7.1 A HOLISTIC APPROACH

Only when all parties involved are inspired to make changes, the fashion industry can transform into a system that takes both people, planet and the economy into regards. To get a holistic understanding of a garment's impact is therefore valuable and necessary to achieve sustainable change.

3.7.2 ENVIRONMENTAL STANDARDS

Garments should be designed with respect for the environment, non-toxicity and with good ethics in mind. The environmental standards should always consider how and if the garment can be recycled or reused for a next life. The pieces of this collection are made in 100 % wool and 100 % silk (see figure 3.3 for bill of material). The material choices are based upon qualities of longevity and durability and their potential to minimize environmental impacts. This due to being long-lasting materials well taken care of, as well as in natural fibres which doesn't need to be cleaned in a washing machine or dried, instead they can simply air-clean outside.

3.7.3 SUSTAINABLE PRODUCTION

To bring diversity into the way we design, produce and make clothing is crucial to create pieces that fit for different desires of uses. The collection created is meant to fit both within slow and fast speed systems, being based on the theory of emotionally durable design and the emotional life cycle assessment. Sustainable production is about transparency and accountability, ensuring good working conditions and produce with resource efficiency. Methods for assessing and ensuring these factors are necessary to include and communicate to one's consumers.

3.7.4 SUSTAINABLE CONSUMPTION

Sustainable production and sustainable consumption goes hand in hand as cross-cutting issue as it is equally as important to challenge the way we consume and engage with fashion, as the way we produce it. The high value fabrics chosen for the collection foster sustainable care and behaviour. The emotional life cycle assessment can be used as a communication tool, strengthening the engagement with clothing. To communicate a garment's narrative will increase the emotional connection to one's piece as the user becomes part of the story. To reduce the distance between maker and user will show the true impacts that fashion consumption inflicts on people and the planet and thus lead to more responsible consumption patterns.

3.8 CONCLUSION

The behaviour of the user is of significant importance in order to contribute to sustainable development. Promoting sustainable consumption doesn't necessarily mean to educate consumers, rather to engage them in new fashion practices. As such, it is increasingly important to offer alternatives to the contemporary way of engaging with clothing by bringing diversity into design, production and retail of garments. To do so, understanding the emotional connection that underpins the relationship between user and garment is of high importance to create garments to meet actual, and different, desires of use.

To assess the use phase in the form of an emotional life cycle assessment adds an extra dimension of analysis as it provides insights in the user's desirability of wearing a garment. Understanding the desirability can be argued to be equally as important as understanding the environmental impact, as the decisions of use, disposal and replacement of garments lies with the user. By also incorporating emotional indicators, innovative solutions in all stages of a garment's life cycle can be implemented fostering healthy resource efficient systems - where garments can circulate in various speeds.

Therefore, there is large potential for a method of this kind to become a useful complement to life cycle assessments. It is clear that, in order to be a relevant assessment, the emotional life cycle assessment needs to be developed and improved, to explore relevant indicators and methods of assessment. Limitations of the method come from the qualitative and subjective data, which relates to the subjective nature of emotions.

Exploring ways of how to assess emotional connection will help build knowledge in the area and represent a research priority. Future research can look into how the results can be considered in the context of the planetary boundaries and in regards to each garment's "moral or acceptable share". In addition, the results can form the basis for creating valuable tools to contribute to sustainable consumption and production.

In conclusion, to produce garments that meet actual, and different, desires of uses involves bringing diversity into the way garments are designed, produced and sold. How the findings from the emotional life cycle assessment can propose solutions in design, business and marketing will be explored in the following chapters.

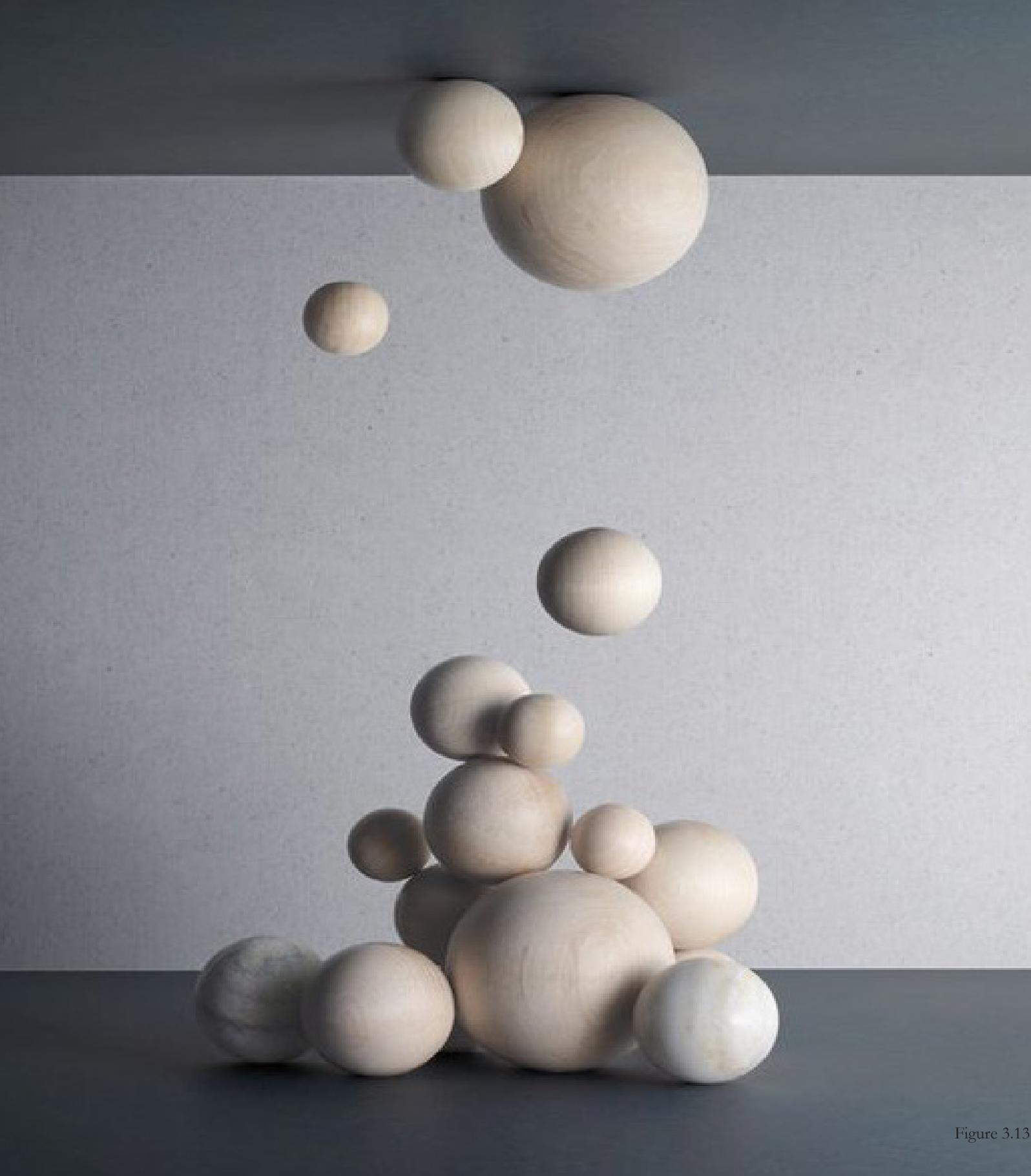


Figure 3.13

4. DESIGN STRATEGIES

Word Count 2418

4.1 INTRODUCTION

Today, fashion based on a throwaway and disposable mindset still largely dominates the industry. To design garments to last is far away from contemporary fashion. Garments are kept in fashion for shorter periods of time, resulting in up to fifty micro-seasons per year, spurring consumers to replace one's clothing more frequently (The True Cost, 2015). Quick turnover of trends, increased accessibility of clothing and an insatiable desire for more and newer pieces form the basis of this, by no means sustainable, economic model. This accelerated cycle of producing, consuming and disposing have created consumerist cultures where little or no value is given to the clothing one owns (Siegle, 2012).

A concept that is challenging the way we engage with the material culture is emotionally durable design. In his book *Emotionally Durable Design: Objects, Experiences & Empathy* (2015) Jonathan Chapman presents emotional durability as a design theory that “looks beyond the sustainable design field's established focus on energy and materials, to engage with the underlying psychological phenomena that shape patterns of consumption and waste”. Emotionally durable design explores the idea of creating deeper and more resilient bonds between user and product with the aim to prolong or optimise these relationships and pioneer a more meaningful form of material culture.

In an era of mindless overconsumption, how can we design garments filled with meaning, self-expression and creativity? How can we design for ongoing experiences?

4.2 DESIGN STRATEGIES

4.2.1 DESIGN, DESIRES AND CONSUMPTION

“Design and material things play a central part in everyone’s lives and the need to bring back meaningfulness and emphasise good design is essential” (Chapman, 2015:22)

Fashion plays an important part in our society. The way we dress tells stories of who we are and who we aspire to be. Fashion is, and has been throughout history, a huge part of our identity and society and is in many ways a fundamental form of self-expression, communication and creativity. In itself fashion is a reflection of social, political, economic and cultural sentiments (Zegheanu, 2017).

In contemporary fashion our engagement with clothing is mainly characterized by short-term use and overcrowded wardrobes full of pieces that get replaced more and more frequently. These patterns have escalated over the past thirty years due to quick turnover of trends, an extensive accessibility of new clothing and low prices (Siegle, 2012). Today we instinctively expect the pieces we buy to become outdated in only a few months and are already at the outset prepared to use the piece for a few times before discarding it. This way of engaging with clothing, combined with a lack of desire to actually keep the clothing for a longer period of time, presents a core challenge in order to transform into a more sustainable future.

Many strategic approaches to sustainable design have emerged aiming to reduce the harmful impacts of contemporary consumption. Designing for sustainability is on one hand about changing technical factors such as materials, technologies, manufacturing and production processes in order to minimize environmental impact and facilitate for reuse

and recycling. Arguably, of greater importance, designing for sustainability is also about changing behaviour, ideas and common perceptions of what fashion is - and what it could become. This view is supported by McKenzie-Mohr (2011) who argues that changing individual behaviour is central to achieving a sustainable future. The same idea is pointed out by Kate Fletcher (2014: 159) stating the need for designers to also “challenge the existing fashion model’s values, perceptions and habits of mind - for they themselves are widely held as the root cause of the problem of unsustainability”.

DESIGN FOR SUSTAINABILITY

CHANGING TECHNICAL FACTORS:
material, manufacturing and
production processes
Design for Recyclability
Design for Disassembly

CHANGING BEHAVIOURS:
ideas and common perceptions of what
fashion is and could become
Emotionally Durable Design
Participatory Design

Figure 4.1

4.2.2 EMOTIONALLY DURABLE DESIGN

Emotional attachment is a vital aspect in order to design for longevity as the user is the one who ultimately decides on a garment's life span. Jonathan Chapman (2015) stresses the importance of emotional durability, not only physical, arguing that "there is little point designing physical durability into consumer goods if the consumer has no desire to keep them". Emotionally durable design is an approach to sustainable design that aims to reduce the consumption and waste of resources by deepening the relationship between user and product. The theory looks beyond approaches such as design for recycling or the specification of less impactful materials and instead focuses on the behavioural drivers of our engagements with products and develops strategies that creates products to last for long due to stronger emotional connection (see 4.2, 4.3 and 4.4 for visual examples). Furthermore, he proposes that a product that offers an evolving user experience can overcome the feeling of it being unwanted and undesired after only a short amount of time. This is something that also Jo Cramer (2011) agrees on, suggesting user engagement to have the potential to increase the emotional connection and thus generate longer lasting relationships.

Jonathan Chapman (2015:175) has developed a six-point experiential framework for emotionally durable design including:

- Design for narrative: users share a unique personal history with the product: this often relates to when, how and from whom the object was acquired
- Design for detachment: users feel no emotional connection to the product, have low expectations and thus perceive it in a favourable way due to a lack of emotional demand or expectation
- Design for surface: the product is physically ageing well, developing a tangible character through time, use and sometimes misuse
- Design for attachment: users feel a strong emotional connection to the product due to the service it provides, the information it contains and the meaning it conveys
- Design for fiction: users are delighted or even enchanted by the products as it is not yet fully understood or known by the user; these are often recently purchased products that are still being explored and discovered by the user
- Design for consciousness: the product is perceived as autonomous and in possession of its own free will; it is quirky, often temperamental and interaction is an acquired skill that can be fully acquired only with practice

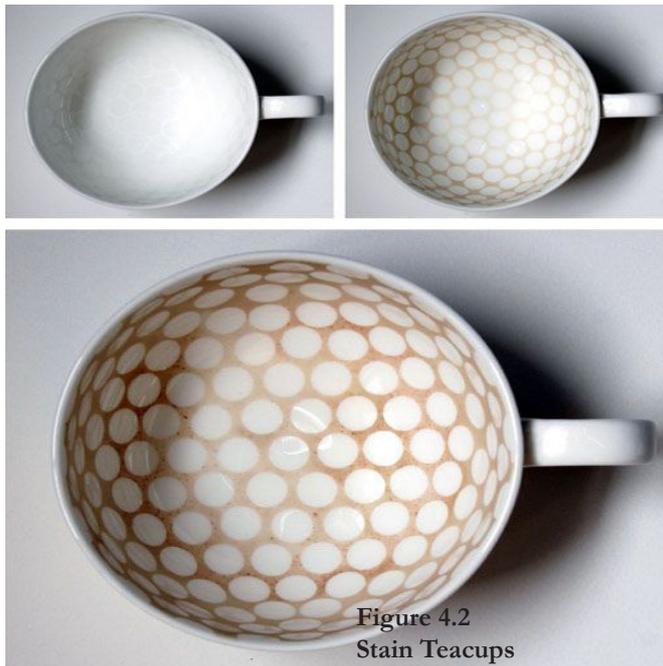


Figure 4.2
Stain Teacups

These teacups are designed to improve beautifully over time. Through picking up tannin from use a pattern will be revealed, reflecting the user's personal way of drinking tea.

Source: Laura Bethan Woods, 2006

Figure 4.3

Circle 1 Dress

The circle 1 dress is created with the aim to design easily transformable and adjustable garments that fit multiple shapes and body types, providing longevity and enabling repair/upgrading of individual parts.

Source: Mette Bundgaard Nielsen, 2017





Figure 4.4
365 Knitting Clock

This clock stitches time as it passes by, presenting a physical reflection of time and creating a unique piece of clothing at the end of the year.

Source: Siren Elise Vilhelmsen, 2010

4.2.3 MODULAR DESIGN, PARTICIPATORY DESIGN, DESIGN FOR DISSASSEMBLY

Modular design and Participatory design are two related design approaches in order to design for emotional durability. Both approaches are developed with the aim to optimise the lifespan of a garment and engage the user in the wearing of it.

Participatory design is a design strategy that engages the user to be part of the design and/or making process of a garment. Jo Cramer (2011) proposes that by engaging a user in the design of a garment a stronger emotional connection is created, resulting in pieces that are cherished and kept for longer. Being part of the design process can also be argued to have a trickling effect in other aspects of sustainable behaviour, such as building competencies for mending or re-making.

Modular design increases a garment's physical durability and allows it to serve more purposes by being versatile and multifunctional which in turn reduces the need to buy several garments (WRAP, 2015). Design for disassembly facilitates end-of-life aspects of the garment, making it easier to detach the pieces for recycling or reusing of the material and its components (Fletcher, 2014)



Figure 4.5

4.3 DESIGN CONCEPT

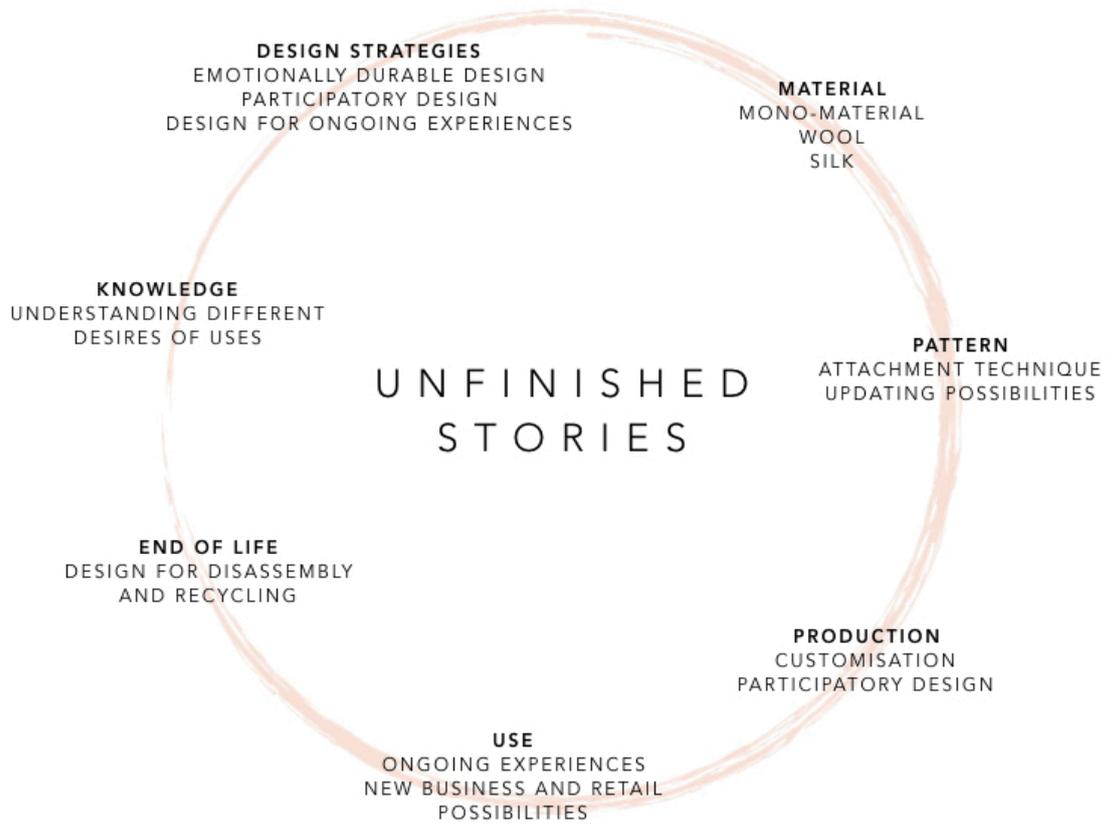


Figure 4.6

4.3.1 DESIGN FOR ONGOING EXPERIENCE

In *Design Activism: Beautiful Strangeness for a Sustainable World* (2009: 87), Alastair Fuad-Luke proposes that "an intertwined strategy is required: the strategy to directly improve the eco-efficiencies of the product or service throughout its lifecycle, and the strategy to deliver eco-efficiency indirectly by changing behaviours".

Design for ongoing experiences is the conceptualization of a strategy of this kind by combining above presented theoretical perspectives and design strategies. The idea is to create garments that by their design offers alternatives to the contemporary way of engaging with fashion. The garments are never complete and allows the wearer to use various strategies changing the garment and affecting its life cycle. The purpose is to explore if the use phase can be extended by allowing the wearer to update, modify and change the fit, style, colour and look satisfying both changing needs and changing desires. Design for ongoing experiences thus have the potential to reduce consumption of new garments and create stronger emotional attachment with the garments one already own by increased user engagement and participatory design elements. How design for ongoing experiences operates in retail and in a commercial context is described in the marketing and business chapter.

The capsule collection "Unfinished Stories" is embodying this design strategy by the creation of garments that can act as canvases for future experiences, by giving the user the possibility to update, modify and change the garment over time. The aim is to create garments that capture value over time, instead of losing value. Quality and value are not only measured by the longevity of the

garment and its material, but also through the short-lived experiences it creates, forming the expression of identity, personalisation and material culture.

4.3.2 EMOTIONAL DURABILITY RESEARCH

Some garments are kept in our wardrobes for a long time, either being actively used over years with stories still unfolding, or kept as a memory of some time. There are also garments that are kept in the back of a closet never to see the day of light. A better understanding of why this occurs is vital in order to design for emotional durability and create garments to fit different desires of use.

Through the emotional life cycle assessment (see 3.3) some tangible parameters could be noticed, which in combination with the design strategies have been used as guidelines for the design in terms of aesthetics such as colours, shapes and forms. Key outtakes that enhance longevity are neutral colours, plain shapes, comfortable fabrics, the possibility to adjust the garment in its fit and materials that are easy to take care of.

4.3.3 AESTHETIC INSPIRATION

The aesthetic inspiration comes from the Japanese philosophy of Wabi-sabi, describing aesthetic as a beauty of things that are “imperfect, impermanent and incomplete” (Koren, 2008). Key characteristics include roughness, simplicity and the appreciation of natural decay and growth. According to Richard Powell (2004) “Wabi-sabi nurtures all that is authentic by acknowledging three simple realities: nothing lasts, nothing is finished and nothing is perfect”. Wabi-sabi is reflected aesthetically in the choices of materials, neutral colours and raw edge finishings. The philosophy is also reflected strategically in the services that each garment offer, letting them be unfinished stories with the possibilities to evolve throughout their lives.



Figure 4.7



Figure 4.8



Figure 4.9

WABI SABI



Figure 4.10

SHAPES AND FORMS



Figure 4.11



Figure 4.12



Figure 4.13



Figure 4.14



Figure 4.15



Figure 4.16



Figure 4.17



Figure 4.18



COLOUR CARD

MATERIALS

All garments in the collection are designed in mono-material as a way to improve their eco-efficiency and making design for recycling possible, overcoming the challenge of fibre blends as a technical issue that limits the success of recycling (Fletcher, 2014). Material choices have been decided based on qualities of durability and longevity, from understanding what materials that are desired and will increase emotional connection. Both wool and silk are cherished materials that are well taken care-of, of high value and kept for a long period of time.



Figure 4.19



Figure 4.20

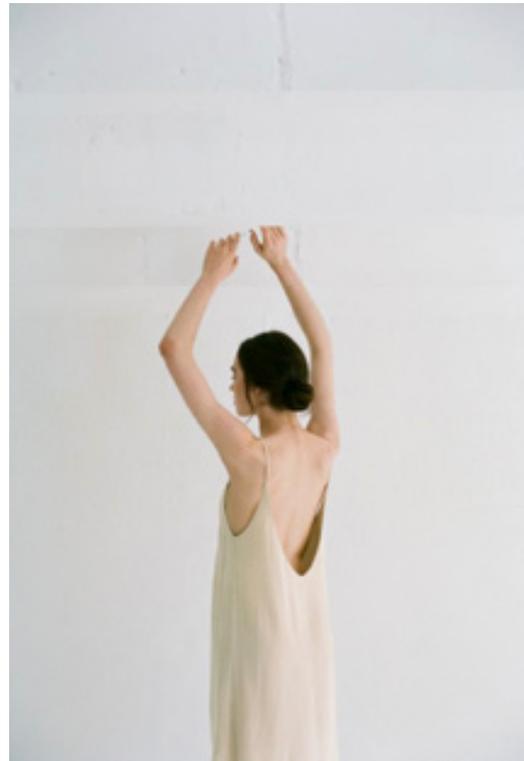


Figure 4.21

4.4 DESIGN PROCESS



Figure 4.22

DESIGN FOR FAST SPEED SYSTEMS:

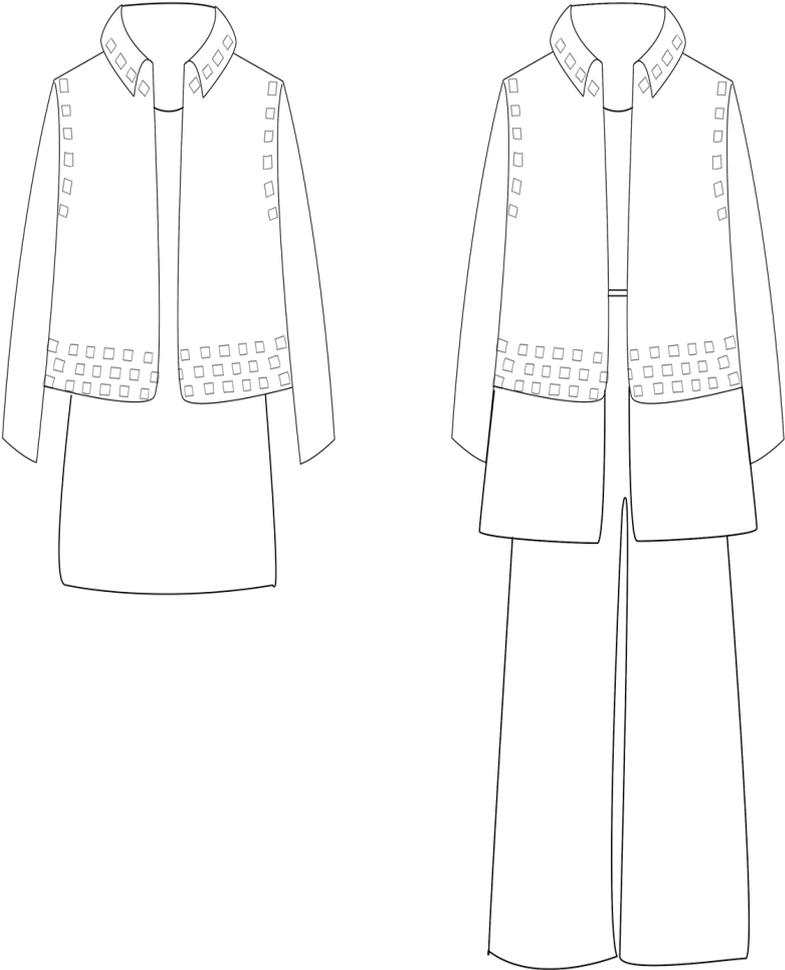
fast use, piece shared between many users, updating possibilities to renew it over and over again, design to change material systems for short-lasting innovative fibres and fast life cycles, no emotional connection

DESIGN FOR SLOW SPEED SYSTEMS:

Long-lasting pieces, several life cycles, high emotional connection, adaptable and modular design, high-quality, slow techniques, hand-craft, *slow* materials, versatile functionality



4.5 COLLECTION OVERVIEW



COAT

The two coats are made in 100 % felted wool (see 3.4.3 for environmental specifications). The decision of wool is based on its durability, high quality and versatile functionality over various seasons and occasions. The coats are designed with the strategy of design for ongoing experiences and key concepts of emotional durability in mind. They are referencing design for attachment as they are created with layered modular pattern technique, making each coat more useful as they serve more purposes by being multifunctional. The coats can be used long, short, sleeveless, with or without a collar, depending on the season and the desire of use. The attachment technique is made without any additional material and references design for surface and design for fiction. The holes created give the user the possibility to continuously update and thus customize one's coat by using different weaving techniques, fabrics and colours. As a result of the construction of the pattern and attachment technique all actions are reversible meaning there is an endless possibilities of ongoing looks. As with Wabi-sabi the coat is "imperfect, impermanent and incomplete". These practices engage the user and create infinite opportunities of ongoing experiences with the same garment, letting the garment circulate in a slow speed system while also satisfying fast fashion parameters such as renewal, self-expression and the desire to update the style.

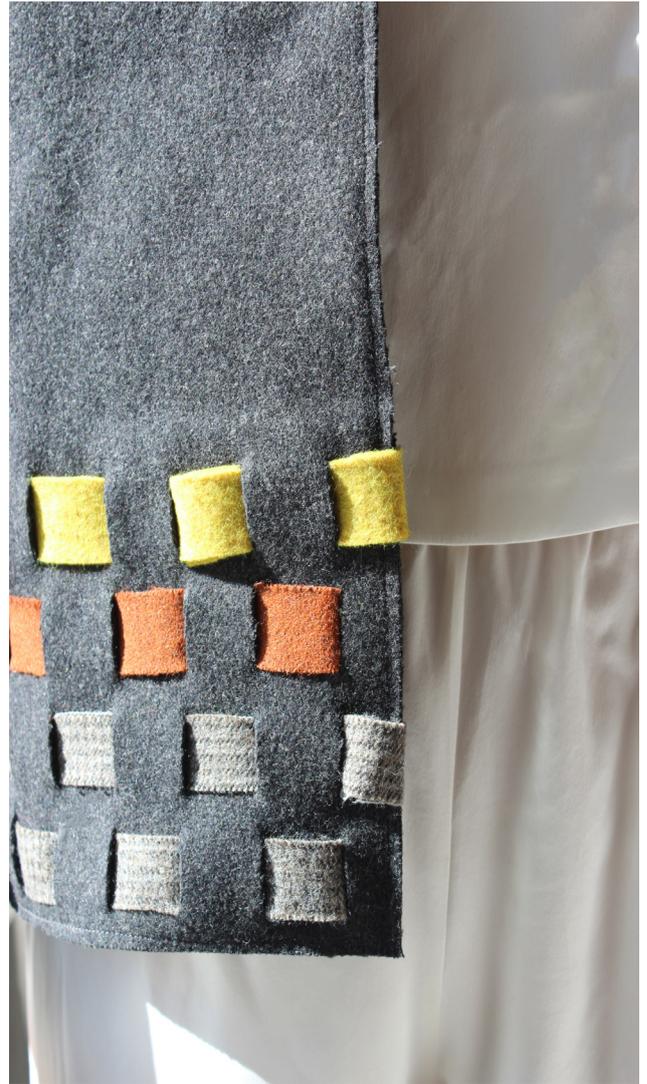
DRESS, TOP AND PANTS

The dress, top and pants are made in 100 % silk (see 3.4.3 for environmental specifications). The garments are created with the strategy of design for ongoing experiences in mind. They are made to fit either within a fast speed system shared among many users or in a slow speed system with one user. This duality has provided the opportunity to explore different routes when looking into how a design strategy for ongoing experiences can operate in retail. In reference to emotional durability and fast speed systems, the strategy of design for detachment says that when a user do not expect to feel any emotional connection to a garment, using the piece might lead to counterproductive feel and a stronger emotional connection by knowing the use is limited. This emotional connection might occur when garments circulate among many users in a lease system for example. On the contrary, a silk product in a slow speed system in relation to emotional durability references design for narrative. This means that a user shares a unique personal history with a garment often relating to when, how and from whom the piece was acquired. As silk is a cherished fabric it is often well taken care of, mended and handed down among generations. This notion were key factors in contributing to longevity of garments according to the emotional life cycle assessment (see 3.3). The decision of using a white textile is based on qualities of longevity and the fact that white allows for easier re-dyeing in a recycling or reuse stage of the garment, letting it circulate longer in a slow or fast speed system.











Photographer: Erik Cronberg
Model: Minna Lennermo
Location: Stockholm, Sweden

4.6 CONCLUSION

Design in any field, whether it's in fashion, products, cities or systems, have an enormous potential to be a driving force for sustainability. It is therefore crucial to look at design from a wide perspective. Designing for sustainability is not only about designing garments, it's about designing new ways of engaging with fashion and thus change behaviours. Exploring design strategies that engage the user can increase the emotional connection and result in reduced consumption of new garments without losing any creative value. Design strategies of this kind have the potential to shape new innovative business strategies and ultimately new systems of fashion engagement. Systems where our engagement with fashion doesn't occur solely in a cycle of producing, consuming, owning and disposing - but where we engage with garments in various speeds. How the strategy design for ongoing experiences operates in retail and in a commercial context is described in the following chapter.

5. BUSINESS AND MARKETING

Word Count: 5740

5.1 INTRODUCTION

The fashion industry is closely aligned to a linear way of production and consumption and relies on large quantities of resources to quickly be manufactured into clothing, worn on an average of seven times until being disposed (The True Cost Movie, 2015; Greenpeace, 2016). The speed of this process is constantly increasing, fueled by an ever-expanding consumer demand for new pieces of clothing. An economic model of this kind, based upon mass-production, low-cost pricing and high-volume consumption, is rapidly reaching its physical limits. The consequences of relying upon a linear economy on a planet with finite resources are not hard to imagine and result in resource degradation, accumulation of waste and violation of human rights, among others (Fletcher, 2014).

To battle these consequences, many players of today's fashion industry strive towards innovations that enable a circular economy (Ellen MacArthur Foundation 2017; H&M, 2017; Mistra Future Fashion, 2017). Promising innovations and solutions of today such as less impactful fibres and textiles, improvements in manufacturing and recycling technologies and design strategies to minimize waste and prolong lifespans of garments are inspiring and will play a vital part when transitioning into a circular economy. However, in order to drive a true paradigm shift, these initiatives need to be complemented by business model innovation that opens up new ways of doing fashion commerce.

One of the main challenges when striving for circularity is the industry's dependency on high speed production and fast, high volume consumption (Fletcher, 2014; Siegle, 2012). Today, the fashion industry is almost exclusively dependent on

selling new pieces of clothing. Driving sustainable change requires the creation of alternatives to contemporary ways of consuming by bringing diversity into design, production and retail to let garments travel in different speeds. Ways in which consumption doesn't necessarily mean ownership, but accessibility. Ways where the creation of new customer offerings exceeds the benefits of traditional consumption while opening up new revenue streams and foster sustainable economic growth.

How can actual material resource use be separated from consumption as well as from creative and financial value?

“The scale of what we’re designing has shifted from products, to companies to economic systems” (Tim Brown IDEO, 2017)

5.2 BUSINESS MODEL INNOVATION: WHY, WHAT, HOW

5.2.1 WHY

The face of business is changing, whether we want it to or not. The need to innovate and develop one's business model and find alternative ways of creating value is becoming increasingly important for companies. This not only due to environmental and social factors (see 2.3) but also due to economic and commercial factors such as increased competition among companies, rising raw material costs, increased legislation and changing consumer behaviour (WRAP, 2015; Circle Economy, 2015). The need for business model innovation in the context of sustainability is emphasized in a report by Boston Consulting Group and MIT Sloan Management Review (2017) stating that "sustainability success requires a long-term, strategic level commitment combined with business model innovation that goes way beyond changing light bulbs or charitable giving".

According to Kay Plantes (2015) business models have become a new basis of competition, even replacing product features due to the excess of supply we're witnessing in many of today's markets. For almost every product a consumer wants there is another hundred, thousand or maybe even million options of similar products. This is especially applicable in the fashion industry. Take, for example, the search for a simple white shirt to wear with a pair of jeans. First, let's imagine looking in stores or online. The vast excess of different stores, brands, styles and options give endless varieties to choose from. Even if the search is narrowed down to a 'white, long-sleeved shirt in viscose with two pockets' one will still be faced with endless alternatives. Therefore, competing on product features is increasingly difficult. This increase in competition can also be traced to the impacts that globalisation

and digitalisation have had, giving consumers endless access to products from all over the globe. In addition, forecasting in many industries show that consumers and businesses shift towards innovative service-based offerings. In the context of fashion, an increase in clothing libraries, leasing-opportunities and subscription based models that offer an experience of fashion rather than owning a piece can be seen (Antikainen & Valkokari, 2016; Circle Economy, 2015). A study by Vend (2017) highlights that 'retailers who promote product quality, transparency and sustainability will flourish' as a first trend considered to have major impact on the retail industry in the coming year. This is followed by a second trend explaining that 'stores that provide unique in-store experiences will thrive'.

Building on these notions, it is clear that companies who already innovate their business models and tap into more service-based and less material resource intensive offerings will gain competitive advantage while offering an experience of fashion to their consumers.

5.2.2 WHAT

A business model describes the way of how a company creates, delivers and captures value (Osterwalder & Pigneur, 2010). In literature on sustainable business model innovation, value creation is understood in broader terms than purely economic value and takes environmental and societal value in consideration as well. Service-based business models and circular strategies are recognized as key to deliver this greater notion of value (Evans et al, 2017; Circle Economy, 2015).

To innovate one's business model is a way to revitalize the company, create new customer offerings and gain competitive advantage. Transitioning into a circular economy opens up many possibilities of what business model innovation can look like; from recovering and preserving already existing clothing, to upgrading their value through smart solutions as well as inventing services that let the pieces circulate among many users.

Best practice examples

By questioning the status quo, people and organizations gradually disrupt it. Innovative ways of thinking provide companies with the ability to challenge conventional presumptions. Below are a few best practice examples of companies that by innovating their business models are changing the way fashion is produced and consumed today.

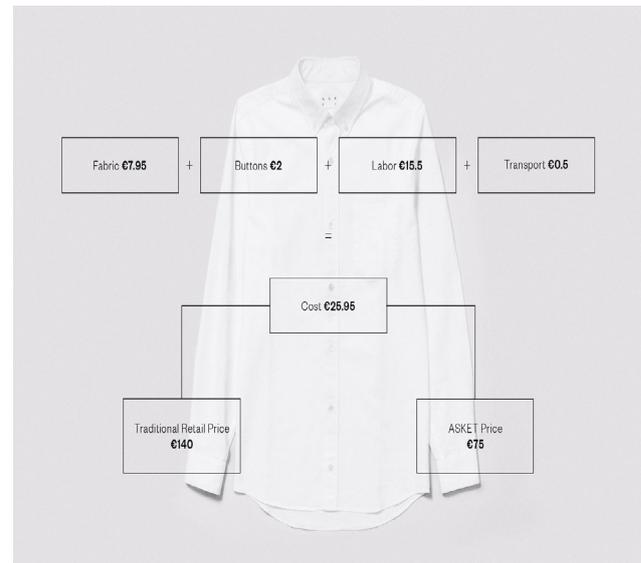


Figure 5.1

ASKET

Asket is an online menswear brand changing the way we manufacture, sell and consume garments. By offering one permanent collection and transparent pricing they are challenging contemporary assumptions of what fashion is and could become:

“Essentials, the pieces we love and use the most, have one thing in common – they’re timeless. Not in or out of fashion. So we’ve chosen to disregard seasonal collections, and put all our focus on building a permanent wardrobe. Instead of starting from scratch every season, we can build upon our experience, listen to our customers and incrementally improve each garment over time. That’s right. Our pieces are never done. We think of it as software with small tweaks in every release. So if you ever return to get another Oxford Shirt, we guarantee, it will be even better than the last” (Asket, 2017).



Figure 5.2

FILIPPA K

Filippa K, a leading Swedish brand in sustainability, has a holistic approach in order to improve their business and inspire others in the industry. Their sustainability initiatives cover all aspects of a garment's life cycle, from what material is used, how and by whom the piece is produced by openly sharing information on each factory, how it is retailed to end-of-life strategies. Filippa K have integrated a lease service into their business model as an alternative to traditional consumption described as follows:

“Our collections are available for rent. A great option for keeping your wardrobe curated and updated, enabling you to temporarily own additional pieces instead of stacking up for the sake of it. Renting clothes, like swapping or up cycling, is a service on the rise. Filippa K Lease is part of our overall ambition to create fashion inspired by long-lasting simplicity, created with minimal footprint” (Filippa K, 2017).



Figure 5.3

RE/DONE

RE/DONE reconstructs old pairs of Levi's jeans into modern fits, giving them a new life and showing its consumers both how to recover value from something seen as 'waste' and also how to reduce the environmental impacts of consumption by purchasing post-consumer fashion:

“RE/DONE is a movement to restore individuality to the luxury fashion space, a movement to keep heritage brands relevant, and a movement to create sustainable fashion. Vintage Levi's denim carries within its stitching, stories of years of wear – a history of a past life. Its travels have been recorded in the frayed pockets, the whiskered colouring, the torn knees, and the faded denim. These pre-loved jeans have circulated owners and changed hands over the past few decades, transforming them and giving them a life of their own” (RE/DONE, 2017)

Having sustainability as a key driver of business model innovation presents prosperous opportunities that meet consumers' desires differently, while driving future sales and creating financial and creative value. Circle Economy (2015) describes three main approaches applicable to service based business models and circular strategies:

- **Circular** - creating value from waste. The purpose is to eliminate the concept of waste by turning waste streams into useful and valuable input for other processes. Involves strategies such as closed loop models, reusing and recycling.
- **Servitization** - access over ownership. Providing services that satisfy user's needs without having to own physical products. Involves strategies such as repair and warranty, renting and leasing and subscribing.
- **Sufficiency** - encourage effective resource use. Find solutions that actively seek to reduce consumption and production. Involves strategies such as demand management, co-creation and the use of excess capacity.

In relation to this research project's earlier argumentation and findings, it is necessary to explore solutions where consumers can engage with clothing in both fast and slow speed systems (see 3.5). Exploring solutions of this kind, starts by considering questions such as: What services allow

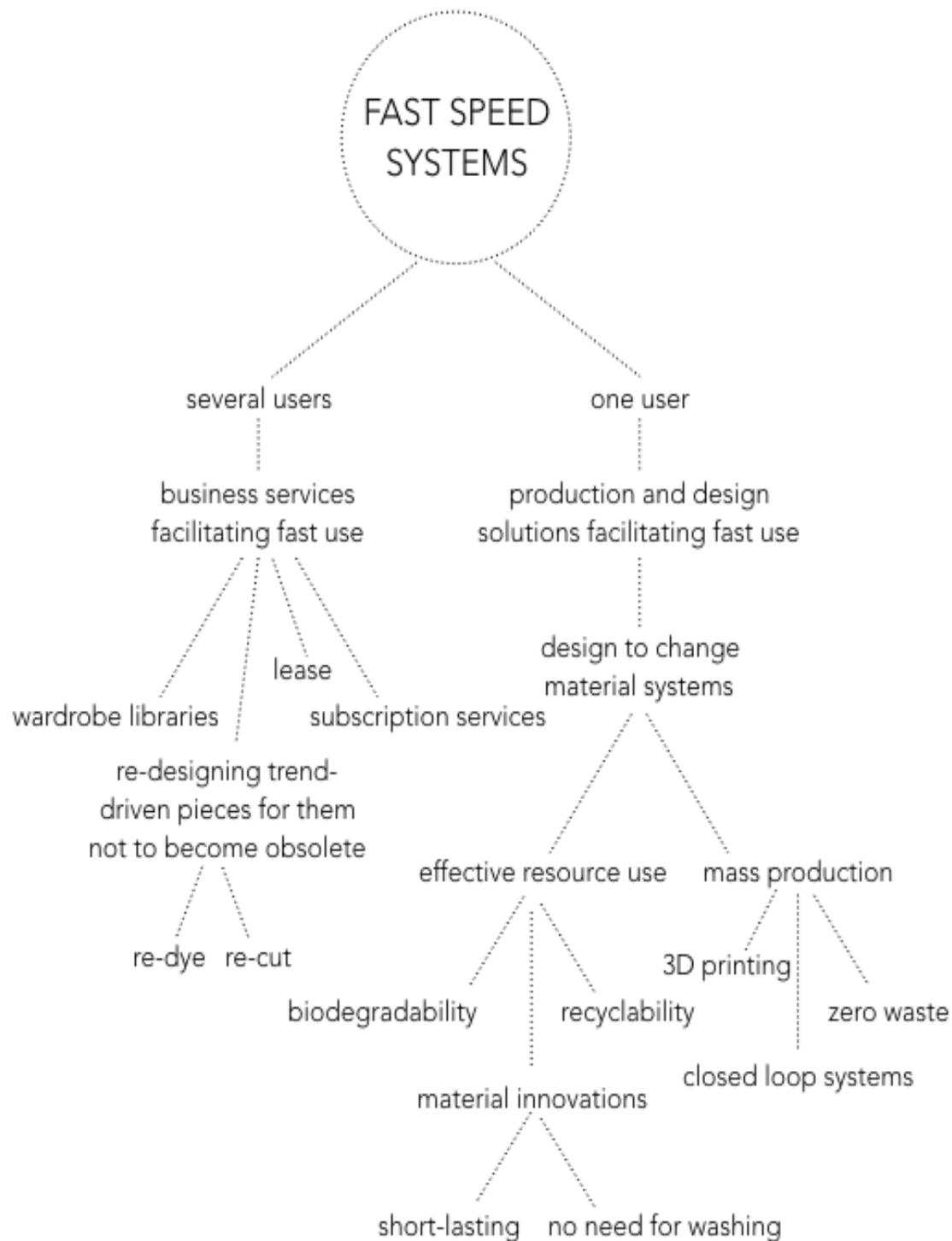
for fast consumption and fast usage? How can the use phase of a garment be extended? Can a garment be produced with an end-date in mind? Can a garment be made without an end-date in mind? Are there solutions that facilitate both fast and slow parameters?

Proposing solutions for also fast engagement comes from arguing that since fast fashion exist, and most likely will persist, one should also look into solutions that let garments travel in fast speed systems. There's no need to improve physical durability of a garment if the end user doesn't have the desire to keep it. Instead, a garment of this kind could be produced on the premise to only last a few times before being recycled or biodegraded. This innovative approach to sustainable fashion, described as "ultra-fast fashion" or "fast fashion without guilt", implies that a piece already at the outset is produced with ultra-fast consumption in mind before being discarded in a healthy system (Mistra Future Fashion, 2016).

On the contrary, garments meant to stay with one user and thus be long-lasting should be created with design strategies and material choices that facilitates this slow speed such as emotionally durable design (see 4.2.2). Garments aimed to circulate among many users can already at the outset be produced with design solutions and services that facilitates several life cycles and let the pieces circulate in society. Services of this kind are for example re-selling, leasing or subscription initiatives. Offering these services requires high quality garments in order to be sure that the garments will last for several users, while retaining their value so the pieces can be used over and over again.

A conceptual systems thinking framework is presented (Fig 5.4). The framework depicts various strategies of what business model innovation in a context of fashion speeds might look like. The ambition is to explore business and design solutions that meet consumers needs and desires differently while proposing new sell-opportunities, letting garments circulate in both fast and slow speed systems.

The framework is in part constructed on above theoretical reasoning, and in part based on empirical findings from the emotional life cycle assessment (see 3.3). Data was collected via a questionnaire where the respondents gave insight in how they wished to engage with their clothing, which was put in relation to fast and slow speed (see appendix 2).



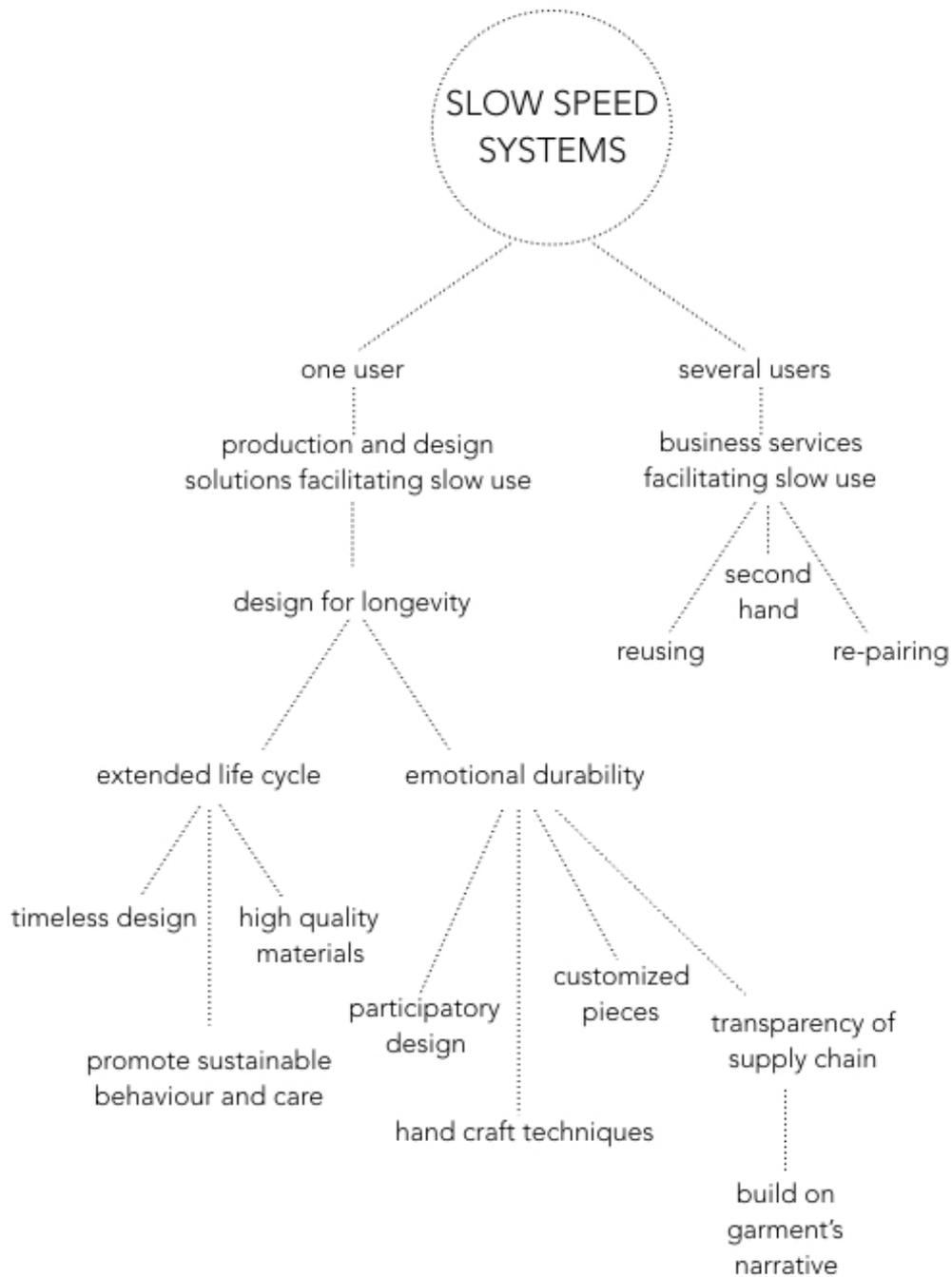


Figure 5.4

5.2.3 HOW

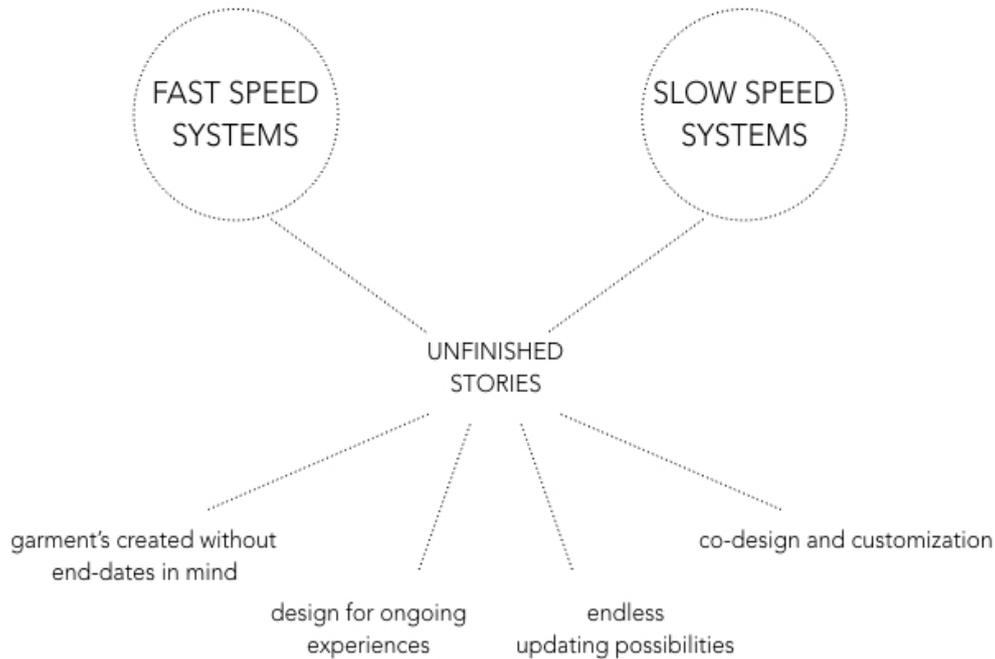


Figure 5.5

UNFINISHED STORIES

Design for ongoing experiences (see 4.3) brings to life the overarching vision of Unfinished Stories. By their design and retail options, the garments offer alternatives to the current fashion consumption model. The garments are designed without an end-date in mind and thus allow for ongoing experiences throughout their lifecycle. The idea is to allow the consumer to use various strategies, changing the garment and affecting its life cycle - allowing both fast and slow fashion parameters within the same garment. Design for ongoing experiences have the potential to reduce

consumption of new garments and create stronger emotional attachment with the garments one already own by increased user engagement. The pieces are wardrobe staples but includes services that offer ongoing experiences improving each garment over time and letting each piece be an unfinished story. The benefit of implementing a strategy like this for a company is to offer a less material intensive service, find new revenue streams, reimagine consumer engagement and to promote a culture of innovation and creativity for both business employees and its consumers.

CASE STUDY

This research project explores a design and business strategy, Unfinished Stories, aimed at companies that already are well-aware of the sustainability discourse and are looking for additional ways to innovate their business. A single case study method (see 1.3) was chosen to apply the strategy on a real-life example to explore the usage, benefits and development needs for a strategy of this kind. The following marketing and business plan for design for ongoing experiences is created for a company who possibly can integrate this strategy into their existing business model. The research is grounded in an analytical framework for business models, known as the Business Model Canvas. The framework includes essential elements describing a company's value creation processes (Osterwalder & Pigneur, 2010). A summary of the business model canvas can be seen in appendix 3.



Figure 5.6

5.3 BUSINESS PLAN

5.3.1 COMPANY DESCRIPTION

Kerber is a growing sustainable fashion company founded in 2013 by Marielle Kerber following her vision to ‘create high quality garments of timeless and elegant style with utmost care for both people and the environment’. The company is expanding into new markets and have retailers world-wide, as well as their own store in Stockholm, Sweden and a strong online platform. Kerber has a long-term commitment to sustainability in all aspects of their business. The company’s work is guided by five core values:

- Care for people and local communities
We hold a genuine care and respect for all people with whom we work, from the tailors in Vietnam to our personnel and partners in Sweden.
- Culture and craftsmanship
We have a deep appreciation for the traditional culture of Vietnam and the skills and craftsmanship of our local Vietnamese tailors and other staff
- High quality fabrics and tailoring
We choose quality fabrics that are flattering to wear and easy to handle. All of our garments are manufactured according to Kerber’s renowned tailoring standards.
- Timeless and elegant design
We produce clothes with elegant lines and a timeless style, based on continuity and a tailored approach to construction with a special consideration to detail.

- Commitment to a sustainable environment
We have a long-term commitment to continuously improve our environmental performance, for example by choosing our fabrics carefully, working to minimize any spill and waste in our production and promoting a longer garment life span.

In addition to well-thought through and carefully made decisions in material choices, design and production, Kerber also works towards sustainable consumption by offering retail services that are innovative, and unique, in today’s fashion industry. Kerber offers two collections per year; autumn/winter and spring/summer. Alongside these collections, they have a made-to-order collection as well as a permanent collection “Kerber Essentials”. The aim is to minimize any unnecessary or unwanted production, and to let all pieces match over seasons - in material, design and colour choices. Based upon the success of these two strategies, implementing an additional service into their business model seems feasible.

5.3.2 VALUE PROPOSITION

For the company: to improve business bottom line through business model innovation, additional sell opportunities on each piece due to updating possibilities, new revenue streams, unique selling proposition, gain competitive advantage, consumer loyalty.

For its customers: unique pieces tailored to one's individual desires, customisation, emotional connection with one's garment, user participation and engagement, experience of fashion.

5.3.3 MARKET RESEARCH AND POTENTIAL

The market research is based on partly theoretical analysis of online sources, and direct discussions with players in the industry: Design for Circularity, Mistra Future Fashion, Kerber and Filippa K (see 1.3 Methodology)

Kerber is presently positioned in the high-end fashion scene of Sweden, among competitors such as Dagmar, Rodebjer, Stylein, Toteme, Filippa K. Market research, as discussed in earlier chapters (see 5.2), demonstrates that there is a drive from the fashion industry towards offering alternative ways of selling and producing clothing. The increase of DIY, re-selling activities, leasing, sharing and subscription proves this. This drive presents a great opportunity for Kerber to excel in their intended market. As a result of strong competition on the Swedish fashion market and brands competing on similar prices and channels, Kerber can find competitive advantage by competing on other variables.

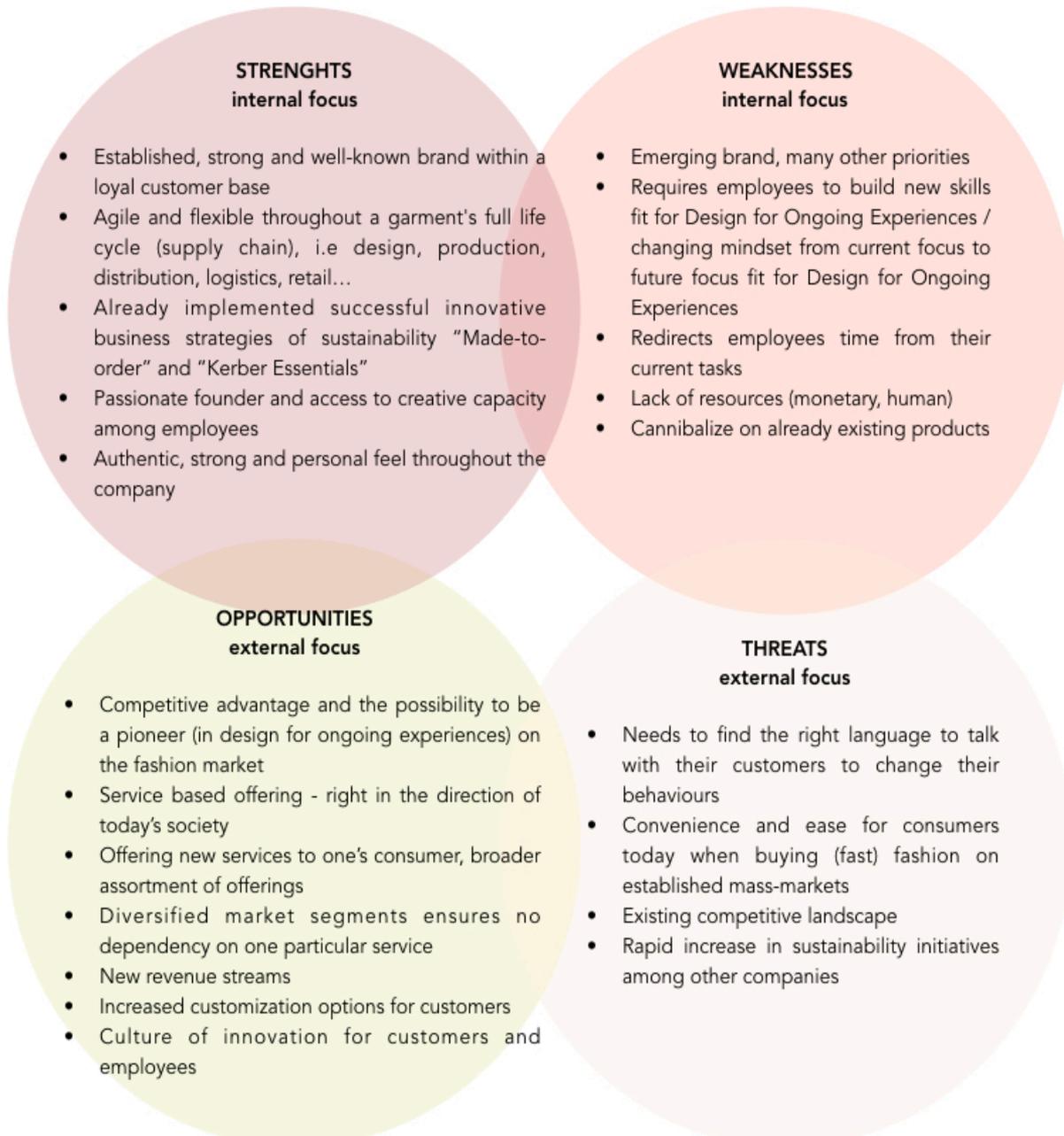


Figure 5.7

5.3.4 TARGET CUSTOMER

Kerber's current target group is a career-woman in the age of 28 - 55 years old. The garments are designed to be versatile, and meant to function all through the day - from the office to a dinner. The customer values the creativity, craftsmanship, high quality and design that is put into the making of the clothing and is thus prepared to pay a bit higher price. The strong and authentic feel that is Kerber permeates everything from the clothing, to the store, to the website - and beyond.

By implementing this additional strategy, Kerber can build on their already existing expertise and customer relationships. This strategy would give the customer the possibility to update or renew one's clothing. The target customer of a service of this kind should thus prefer change, and be an early adopter interested in alternative ways of updating one's wardrobe. Since Kerber's existing customer base values creativity and craftsmanship, design for ongoing experiences would provide an additional outlet satisfying these notions. Added value from service-based offerings comes indirect via consumer loyalty. Therefore, the success of this strategy is largely based on Kerber's relationships with their existing customer base and their ability to translate their key activities into positive brand value.



Figure 5.8



Figure 5.9

5.3.5 KEY ACTIVITIES

The vision of Unfinished Stories is to create garments that can be updated throughout their lives, prolonging the life cycle and increasing the emotional connection. In order to excel with this approach, several activities and services from different parties involved are needed.

1. Training, Research and Design thinking

Unfinished Stories requires ongoing research in design and production. This revolves around understanding what the consumer wants and desires and to find solutions in the design and production process to fit these desires. Parties involved in this process will first of all be the founder and creative director Marielle Kerber. All Kerber's collections are designed with longevity in mind, created in high-quality materials and in timeless designs. Currently the garments are not designed with an option to be updated. To design for ongoing experiences would as such involve new ways of thinking within design. This requires additional time and training in order to create garments that are possible to adjust and update, but which also fits to Kerber's existing collections and style. In addition, product and manufacturing needs to fit for the production of garments of this kind. As Kerber have their own production site in Vietnam they are very agile in production and supply chain management and have an informal and flexible relationship with all tailors employed.

2. Customer Relationships and Engagement

Another core activity is to involve the customer in this service. As a long-term aim is for the user to participate and co-design in the process, a key activity lies in how to engage the consumer. Due

to the fact that most innovative concepts require a deep understanding and a broader consumer mindshift, this can be expected to take some time. Although, involving customers in the making process will benefit both Kerber as a company by receiving additional insights of their customer's preferences as well as benefiting their customers by increased emotional connection with one's pieces. Currently, Kerber have a loyal customer base and a personal relationship with many of their customers due to the convenient location of the store and the office, which facilitates many meetings between the employees and customers.

3. After Sale Services

Unfinished Stories is equally as much about selling services, as garments. A service based business model of this kind requires new ways of working with one's customers. To design for ongoing experiences implies that there will be a lasting relationship between a company and its customers as the customers will come back to the store for more reasons than to buy pieces. In the long run, updating services can be realized digitally or via online tutorials. The garments will act as conversation pieces between Kerber and their customers. Services that satisfies consumers needs and desires without having to use new material resources have great potential to gradually change behaviours and promote more sustainable consumption, and also Kerber's existing strategies of Made-to-order and Kerber Essentials. The customer experience of the after sale service is fundamental to the offering and value proposition.

5.3.6 KEY RESOURCES

The resources needed from Kerber to offer Unfinished Stories are mainly internal resources in the form of skills of the employees. Kerber's aim towards offering sustainable clothing and promoting sustainable consumption reflects all aspects of their work, including all employees genuine interest in matters related to sustainability in the fashion industry. As such, there is little need for general training or education within this field.

What is needed from Kerber's internal resources is some redirection of their tasks. This involves additional communication with customers, staff-training within the store and design thinking processes. At this early stage there are no specific additional needs for physical or financial resources such as inventory or manufacturing plants. Everything can be handled within their existing locations; the studio, store, office and the production site in Vietnam. As a company implementing this likely is moving into markets and strategies that lies beyond their traditional expertise as a fashion company, partnerships with research organisations or education that facilitates design thinking processes might be valuable for further development. In addition, there is a possibility to tap into other creative communities for collaboration.

5.3.7 COST STRUCTURE AND REVENUE STREAMS

Transitioning a business from producing and selling products, to also sell services changes the cost structure. New cost structures include the redirection of employees time in order to also facilitate this new strategy. In addition, some workshops and training in the beginning will be needed. In order to actively bring an understanding to their customers, additional time and money is needed for marketing, promotion and communication of this new strategy.

This new strategy, will open up new revenue streams. Instead of solely earning money from selling new pieces of clothing Kerber will find additional sell opportunities on each piece of clothing. The pricing strategy can be based either on a per hour / per garment fee when updating it, or the sell of additional pieces to fit the garment. An example of a revenue stream is shown in Fig 5.10, applied to an Unfinished Story of a silk blouse that by the act of re-dye and re-design has been constantly updated.

Unfinished story of a silk blouse
- achieving several life cycles due to re-dyeing and re-designing practices of the piece

Re-dyeing into the new colour for AW17
cost: 40 euros (compared to buying a new piece for 180 euros)



Second re-dye
cost: 30 euros



Re-designing into short sleeves for SS18
cost: 50 euros



Third re-dye
cost: 30 euros



Figure 5.10

5.4 MARKETING PLAN

5.4.1 MARKETING STRATEGY

1. Selling a relationship, not only a garment. Kerber already have a loyal customer base, and personal relationships with their customers. Building on this existing expertise will simplify the realization of a new strategy of this kind. .

2. High quality garments, meant to last. Ensuring that this new strategy holds the same level of quality and design as their existing garments is key in order to be consistent throughout the company. The marketing will thus convey the same sense of quality and aesthetic in each promotion, picture and text.

3. Kerber's target customers are interested in fashion, and value high quality and creativity. They are already appreciating the company's initiatives into strategic selling of clothing via the unique made-to-order and "essentials" collection. Building on this uniqueness, a core element of the marketing strategy will be the differentiation from competitors and the offering of an innovative service. This marketing strategy influences Kerber's presence both online and in-store. As the "Kerber-feeling" is essential to the brand's success it is important to keep the marketing strategy of this design for ongoing experience service coherent with the company's other offerings.

5.4.2 MARKETING MIX



Figure 5.11

Promotion - Kerber is well-known in Stockholm, Sweden but is still expanding to other countries. The concept of slow fashion and minimalism is closely aligned to a Scandinavian fashion scene, and Kerber's existing collections excels in these markets. With strong presence promoting themselves on social media such as instagram, facebook, and with a well-functioning e-commerce strategy and online store Kerber is attracting new customers, from all around the world. This new strategy, shifts the focus a bit from slow fashion, by offering slow fashion with a updating possibility and thus have the potential to attract other segments of consumers if successful in their promotion. The ideas can be promoted online, but will benefit increasingly by starting in-store, in face-to-face discussion describing and letting the customers get a feel of how these garments look and what they can do with them.

Price - Kerber is in a high-end price class. The cost of this new services, are therefore reasonable to assume that its existing target group are willing to pay for. In addition, a service like this leads to less purchased garments, as the one's one already own are possible to update. The updating services will still generate revenue for Kerber, but the consumer will save money on purchasing a service instead of a new piece.

Place - Kerber has their own production in Vietnam, allowing flexible and agile production. It is thus possible to order small-collections, which leaves little risk for overproduction. This is both an economical choice from Kerber due to less stock-keeping as well as an environmental choice, as only pieces that are desired will be produced. At a start, having the garments for Unfinished Stories as part of the Made-to-Order collection would be a great way to test the concept and see the desirability from the customers before producing all pieces.

Product - Kerber's market position shows that it is a high-end brand, with more exclusive garments made in high-quality materials and with well-thought through designs as well as production processes. The new pieces created as Unfinished Stories with design for ongoing experiences in mind, will have the same level of quality. If the pieces are possible to update due to their modular design and pattern construction, any piece that might need repairing for example can be easily fixed.

5.4.3 CHANNELS

Kerber have their own store in Stockholm, Sweden. As a first step this can be the meeting point where services applied to design for ongoing experiences can take place. According to the founder, Marielle, the store already acts as a meeting point and fosters the relationships between the company and its customers. Kerber usually have several events and meetings in the store and to advance these to also include design for ongoing experiences will be possible. As this strategy implies a profound understanding of the garments and their design and updating alternatives the store would be an ideal place to have workshops and discussions of design for ongoing experiences. In the long run, services that facilitate design for ongoing experiences can be offered digitally via guidelines of "how to transform your garment" or "ways to make last season's shirt trendy this season".



Figure 5.12 Kerber's own store on Nytorget, Stockholm, Sweden

5.4.4 COMMUNICATION, BRANDING AND MARKETING TOOLS

Kerber have a strong communication and marketing language, defining the brand and their values. They work with a network of top-photographers, stylists and makeup artists in order to create lookbooks and campaigns that fits the brand. This expertise will be immensely beneficial for this new strategy.

In terms of a communication and branding language, the products will be sold as “unfinished stories” encouraging the consumers to come back to the store to update the piece. The core of the communication is to change behaviour and promote new engagement with fashion. Spreading the word about this new strategy is best made face-to-face by personal marketing, in store, as it requires a deep understanding from the customers. Kerber will be able to communicate this service and information to its customers via their webpage and social media platforms. In addition, following communication and marketing tools (see Fig 5.14, 5.15, 5.16) can be used: create style-guides of how garments can be updated, promotion via Kerber’s own newsletter, by hang tags on the clothing and events such as workshops that brings customers to the store.

Promoting sustainable consumption and communicating about the garment’s story is already of great interest of Kerber. During Fashion Revolution Week 2017 they ran a marketing campaign to encourage their customers to tell love stories about their pieces (see Fig. 13). This was communicated via instagram, facebook, newsletter and on their website. In accordance with this campaign, “Unfinished Stories” can be communicated in the same language and channels.

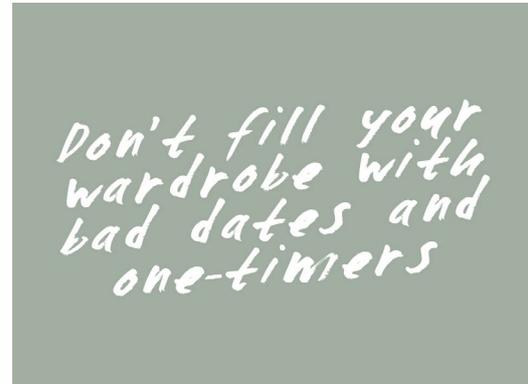


Figure 5.13



Figure 5.14

Styleguides of how to use and transform one's piece can be distributed either digitally or via printed booklets in the store.

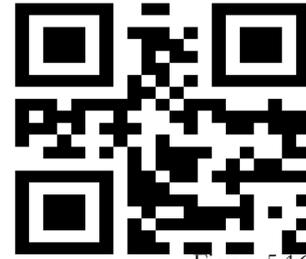


Figure 5.16

Applying QR-codes to all pieces could be another strong marketing tool to consider. The codes can tell the story of the garment, when and where it was produced, by whom, in what material, how it was transported etc. As an additional interactive layer, the customer can be able to add personal information relating to the use of the clothing. This information could be based on the emotional life cycle assessment and show ways of how to improve one's environmental impact during the use phase.

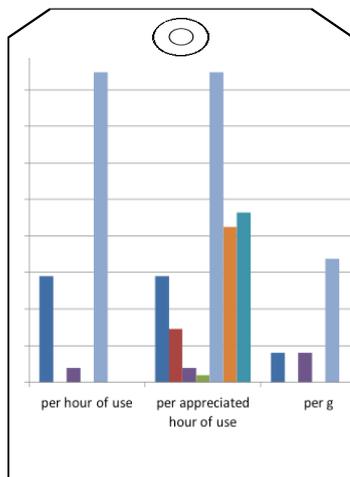


Figure 5.15

Hangtags showing the emotional life cycle assessment (see 3.3) could be used on each piece of clothing, providing the added value of “appreciated hour per use”.

5.5 CONCLUSION

One of the core beliefs is that the fashion industry needs to transition from an industry that profits and grows almost only by selling new pieces of clothing to one that also finds other ways. Ways that reduces the environmental impacts of consumption without compromising any commercial or creative edge. Fashion is no longer about only designing garments. It is about designing consumption, business services and ultimately a new economy. It is thus obvious that in the future business-as-usual will not be an option and there's no alternative to sustainable development.

Business model innovation is vital for companies in order to sustain a competitive advantage, or simply just to exist, in the future. As shown, business model innovation can offer solutions that prosper, promoting sustainable consumption, engaging a company's customers as well as reducing environmental impact - all without compromising creative or financial value.

6. CONCLUDING SUMMARY

This research project started out as an exploration of how to promote sustainable consumption and behaviour in the fashion industry. The research kept expanding due to the complex interdependencies within the industry, from the symptoms of fashion commerce to the very underlying mental models and economic structures that drive the industry. To create long-lasting and impactful change for the industry, it is essential to understand and target all levels influencing today's system.

Transitioning into a resilient and meaningful fashion future is not only about creating pieces that last, but more importantly to create pieces we desire to engage with - no matter if that engagement is slow or fast. Fast fashion is commonly known as characterizing ideas of unsustainability, but what has been understood is that it is necessarily not the speed itself that is unsustainable, but the materials, processes and retail solutions applied. To assess the use phase in the form of an emotional life cycle assessment adds an extra dimension of analysis as it provides insight in a user's desirability of wearing a garment. By understanding this desirability, innovative solutions in all stages of a garment's life cycle can be implemented fostering healthy resource efficient systems where garments can circulate in various speeds. Solutions of this kind have the potential to shape new innovative design and business strategies and ultimately new systems of fashion engagement.

The vision of Unfinished Stories is not only to design garments differently, it's about designing new ways of engaging with fashion. Instead of perceiving garments as final pieces, this research treats each piece as an unfinished story whose value evolves

over time through innovative design strategies and retail solutions. Exploring solutions that engage the user can increase the emotional connection and result in reduced consumption of new garments without losing any creative or financial value.

Finally, achieving a sustainable fashion industry requires a holistic approach where all parties involved need to collaborate and be the designers, dreamers, architects, strategists and creators of the future.

Declaration of Originality

Master of Arts - Sustainability in Fashion 2016/2017

Hereby I confirm that this dissertation is entirely my own work, unless explicitly acknowledged, and that I have clearly referenced, in both text and bibliography, all sources used in the work including text, journals, web, tables, figures and data. I also confirm that I have not submitted this work for assessment at any other university or institution before.

In addition, I understand that any false claim in respect of this work will result in disciplinary action in accordance with University regulations.

Berlin 05.09.2017

JONNA HAEGGBLOM

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8. APPENDIXES

1. Emotional life cycle assessment questionnaire

Slow Fashion Parameters

1. How likely are you to wear this garments more than once per two weeks?
2. How versatile is your garment (works for many occasions, easy to combine)?
3. How aware are you of your garments narrative and supply chain (i.e who made it, where it is produced etc)?
4. How good is the material and quality of your garment?
5. How well does this garment fit you?

Fast Fashion Parameters

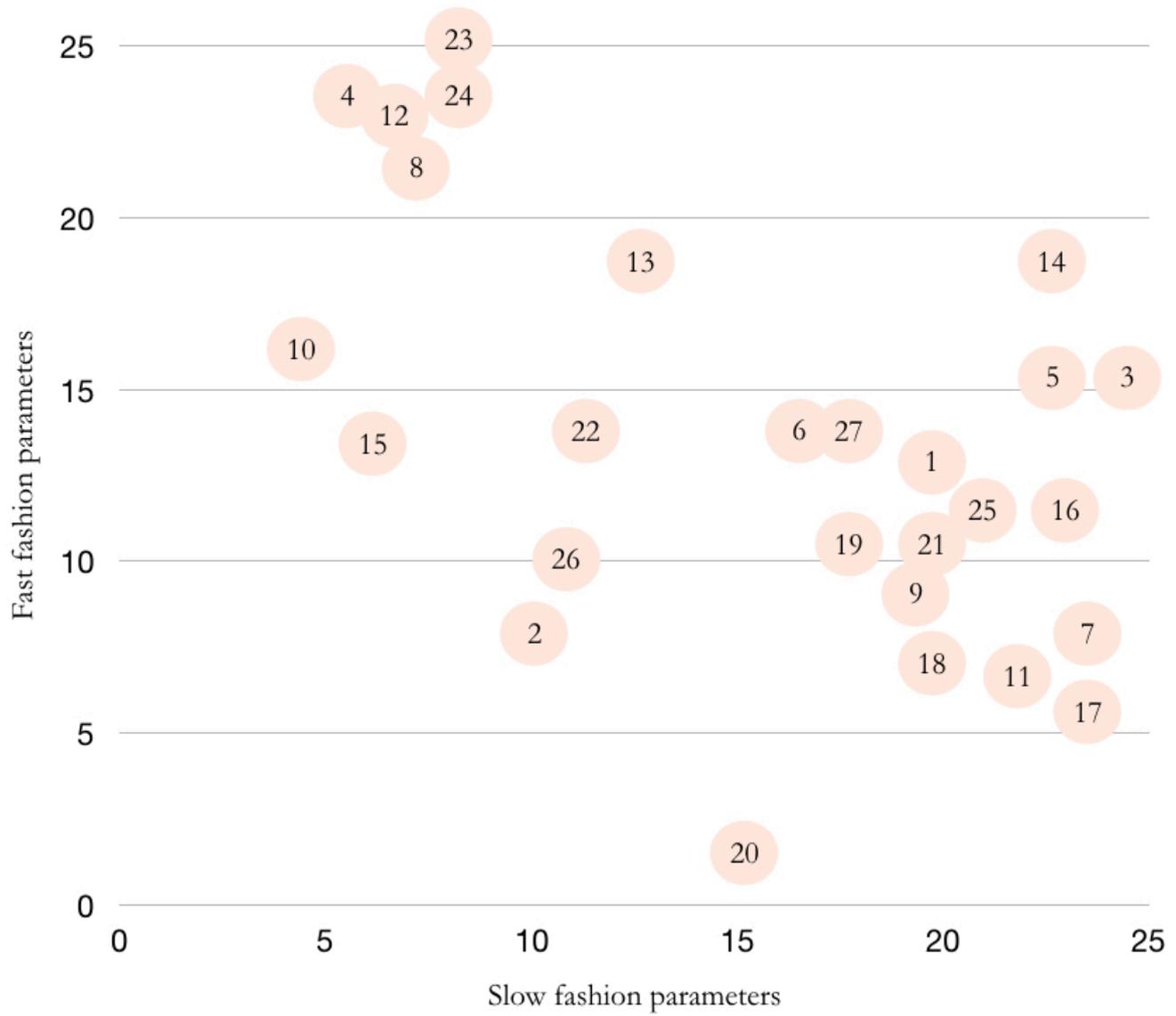
1. How fashionable do you feel in this garment (brand-value, trend-driven etc)
2. How likely are you to dispose this garment after this season?
3. How exciting is your garment?
4. Does this garment add the feeling of something extra and fun to your wardrobe?
5. Does this garment provide you with the opportunity of a creative outlet by experimenting colours, shapes and materials?

	Slow fashion parameters					Fast fashion parameters				
	1. How likely are you to wear this garment more than once per two weeks?	2. How versatile is your garment? (easy to combine)	3. How aware are you of your garment's narrative and supply chain?	4. How good is the material and quality of your garment?	5. How well does this garment fit you? How comfortable?	6. How fashionable do you feel wearing this garment?	7. How likely are you to dispose it at the end of this season?	8. How exciting/trend-driven is this garment?	9. Does this garment add 'something extra' to your closet?	10. Does this garment provide you with a creative outlet?
1. Dress, black, viscose, H&M	5 "I can use it both for work and parties"	5	2	3 "I need to re-buy the same dress over and over"	5	3	4 "because of the poor quality"	2	2	2
2. Low waist jeans, blue, cotton/elastan, Zara	0	5	0	5	0	3	2	1	1	1
3. Pants, black, polyester, Kerber	5	5	5	5	5 "my go-to pants whenever I'm in doubt"	4	0	4	4	3
4. Dress, flower print, viscose, Urban Outfitters	2	3	0	1	2	5	4 "bought it to use at a festival"	5	5 "It feels good to wear something colourful once in a while"	4
5. Coat, black, cotton, Dagmar	5	4 "I even use it over seasons"	4	5	5	4	0	3 "classic silhouette"	5	3
6. Dress, pattern/embroidery, viscose, All Saints	0 "my graduation-dress"	1	4	4	5	4	0 "too much of a sentimental value"	4	4	4
7. Cardigan, powder pink cashmere, Sandro	5	5	4	5 "I take good care of it since it is cashmere"	5	2	0	2	2	2
8. Dress, black, polyester/elastan, H&M	1	1	1	3	3	4	5	4	4	4
9. Dress, black, polyester, Monki	3	5	2	5	5	3	0	2	4	1

	Slow fashion parameters					Fast fashion parameters				
	1. How likely are you to wear this garment more than once per two weeks?	2. How versatile is your garment? (easy to combine/ several)	3. How aware are you of your garment's narrative and supply chain?	4. How good is the material and quality of your garment?	5. How well does this garment fit you?	6. How fashionable do you feel wearing this garment?	7. How likely are you to dispose this garment at the end of this season?	8. How exciting/trend-driven is this garment?	9. Does this garment add 'something extra' to your closet?	10. Does this garment provide you with a creative outlet?
10. Pants, flower print, cotton/elastan, Zara	0	0	0	3	2 "I dislike the way I look in them"	0 "I bought them to look trendy but I don't feel it"	5	4	4	3
11. Shirt, khaki, lycocell, Hope	4	5	3	5	5	2	0	2	3	0
12. Dress, flower print, rayon, Urban Outfitters	1 "summer-wardrobe"	0	0	2	3	5	4 "probably - it's one of those 'holiday buys'"	5	5	4
13. Dress, white, paper/linen, Isabel Marant	0 "but it's one of my favorites"	1	3	4	5	5	0	4	5	5
14. Caftan, blue dots, cotton, Rodebjer	5 "in the summer-season I wear it all the time"	5 "I've wore it at a wedding and at the beach"	4	5	5	5	0	5	5	4
15. Suede Jacket, polyester, beige, brand unknown	1	1 "it makes me annoyed to even see it in my closet"	0	1	3	0	5 "definitely one of those fast fashion buys"	4	3	2
16. T-shirt, black, linen, Filippa K	5	5	4	4 "I have had to repair it"	5	5	0	2	2 "but it's a wardrobe staple"	2
17. Jeans, blue, cotton, Levis	5	5	4	4	5	2	0	2	1 "the basics"	1
18. T-shirt, white, cotton, Weekday	5	5	2	4	4	1	2	2	1	1

	Slow fashion parameters					Fast fashion parameters				
	1. How likely are you to wear this garment more than once per two weeks?	2. How versatile is your garment? (easy to combine occasions)	3. How aware are you of your garment's narrative and supply chain?	4. How good is the material and quality of your garment?	5. How well does this garment fit you?	6. How fashionable do you feel wearing this garment?	7. How likely are you to dispose this garment at the end of this season?	8. How exciting/trend-driven is this garment?	9. Does this garment add 'something extra' to your closet?	10. Does this garment provide you with a creative outlet?
19. Jeans dress, blue cotton, Wavén	5	3	1	4	5	2	1	2	4	4
20. T-shirt dress, striped, viscose/elastan, Dotti	5	2	1	2 "pilling since first wash"	5	0	0	1	0	2
21. Shirt, white, linen, unknown brand	5	4	4 "cut and sewn in Cuba, but imported material"	4	3 "I wish it was a little bit smaller"	4	0	1	5	1
22. Skirt, flower print, viscose/cotton, Lelias Blanc	0	2	0 "but it's handed down from my sister"	5	4	3	0	3	4 "because of the print"	4
23. Blazer, bright pink, lycocell, Zara	0	1	0	2	5	5	5 "it got stained after the first use"	5	5	5
24. Dress, black, silk chiffon, unknown brand	0	0 "only used it once at a gala - wish I would have rented it"	0	5	3	5	4 "I'll try to sell it"	5	5	5
25. Shirt, white, cotton, Acne	5	5	3	4	5	3 "depending on how I combine it"	0	3	4	2
26. Long skirt, black, cotton, Filippa K	0	2	4	4	1 "too tight"	3	4 "it doesn't fit me any longer"	2	1	1
27. Jacket, black, cotton canvas, unknown brand	5	5	0 "bought it second hand at a market ages ago"	3 "it have lost some colour and got stained"	4 "need some repairing"	4	2	3	3	2

2. RESULTS



3. Business Model Canvas

<p>Key Partners </p> <p>Company</p> <ul style="list-style-type: none"> - Design - Business Developer - Store Associate <p>External parties</p> <ul style="list-style-type: none"> - Consultant for training and implementation - Education / Research Institutes - Creative Communities 	<p>Key Activities </p> <p>After Sale In-store Services</p> <p>Market Research: Understanding customers needs and desires</p> <p>New and existing product and design research</p> <hr/> <p>Key Resources </p> <p>Employees: design team, sales associates - trained, creative</p>	<p>Value Propositions </p> <p>Unique pieces, tailored to one's individual desires</p> <p>Emotional connection with one's garment</p> <hr/> <p>Self-expression and individualism</p> <p>User participation and engagement, experience of fashion</p>	<p>Customer Relationship </p> <p>Participation</p> <p>Loyalty towards the company</p> <p>Extending the relationship between the user and business - more meeting points</p> <hr/> <p>Channels </p> <p>In-store services (showrooms)</p> <p>Digital guidelines "how to transform your garment"</p>	<p>Customer Segments </p> <p>Woman 30-60 years</p> <p>Strong interest in fashion, sustainability</p> <p>Values design, hand-craft, high-quality and timeless design</p> <p>Creative</p>
<p>Cost Structure </p> <p>Re-directed employee time</p> <p>Workshops & training</p> <p>Marketing, promotions & communication</p>		<p>Revenue Streams </p> <p>Revenue from services</p> <p>Additional sell opportunities</p>		

