



Terhi Ketola-Stutch

IT'S ABOUT US! And the planet....:

Aim for (Life)Style Where Self-Expression and
Ecosystem Co-Exist.

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Tutkielmani tarkoituksena on osoittaa yksilöiden ja oman tyylimme tärkeys kolmen eri järjestelmän: ekosysteemin, muotisynteesin, ihmisen käytös-systeemin monimutkaisessa yhtälössä. Keskityn erityisesti tarkastelemaan henkilökohtaisen käytöksen muutoksen esteitä sekä mahdollisuuksia vähentää ekologista ylikulutusta. Käytän suhdettamme vaatekaappiimme työkaluna, mutta laajempaa elämäntapojen muutosta päämääränä. Tutkielmassa käytettiin kvalitatiivisia tutkimusmenetelmiä mukaan lukien eletyn elämän tutkimustapaa. Tarkoituksena oli löytää vastauksia kysymyksiin siitä, muuttaisimmeko käyttäytymistämme, jos tuntisimme, ajattelisimme ja toimisimme, niin kuin ekosysteemi on johtajamme. Etsin vastauksia myös siihen, miten kuluttajakäyttäytyminen voisi muuttua kohti tyylikeskeistä riittävyysajattelua. Työn tarkoituksena on myös löytää suuntaa State of Sisu yritykselleni, jonka tavoitteena on tuottaa viihdyttävää ohjausta ja inspiroivaa sisältöä muodin vastuullisen kuluttajakäytöksen tukemiseksi. Aineistonkeruumetodeina on käytetty kirjallisuuskatsauksen lisäksi ryhmähaastatteluja, asiantuntija-haastatteluja sekä lukuisten tapahtumien havainnointia ja niiden sisällön reflektointia. Tutkimus auttoi ymmärtämään tavallisen muodinkuluttajan tietämyksen tasoa ja asenteita. Aineistoa analysoitiin COM-B ja PRIME mallien avulla sekä kyky-, tilaisuus- ja motivaatio-osioiden kautta tuomaan kuluttajakäyttöön pysyvää muutosta. Tutkimuksen luoman tietopojan perusteella State of Sisun on mahdollista edetä strategisesti kuluttajakäytöksen suunnittelua kohti.

Avainsanat: ekologinen ylikulutus, ympäristömyönteinen käytös, kysynnän hallinnan ratkaisut, riittävyys ajattelu, käyttäytymisen suunnittelu

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Abstract

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My thesis aims to demonstrate the importance of us individuals and our personal style in the complex equation of three different systems: the ecosystem, the fashion system, and the human behavior system. I focus specifically on examining the obstacles and opportunities for personal behavior change in order to reduce ecological overshoot. I use the relationship with our wardrobes as a tool, but a broader lifestyle changes as the end goal. The thesis uses qualitative research methods including the lived experience approach. The purpose is to find answers to whether we would change our behavior if we felt, thought, and acted as if the ecosystem was our boss. Or how consumer behavior could shift towards style-centric sufficiency thinking. An additional goal is to give State of Sisu, my research and consulting company, a clear direction for producing entertaining guidance and inspiring content to support responsible consumer behavior in fashion. In addition to literature review, data collection methods included group interviews, expert interviews, as well as observation of numerous events and the reflection of their content. The study helped to understand the knowledge and attitude base of an average fashion consumer. The data-analysis, done using COM-B and PRIME models, helped better understand the capability, opportunity, and motivation sections, which can bring lasting changes into human behavior. Based on the knowledge pool created from the research, State of Sisu can strategically proceed toward consumer behavior design.

Keywords: ecological overshoot, pro-environmental behavior, demand-side solution, sufficiency-thinking, behavior design

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This thesis is dedicated to my daughter Sofia, who is the true inspiration for using my voice and knowledge towards a more hopeful future. And to my mother, who was and still is my guiding light in Goldilocks-thinking.

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1 Introduction

Having spent much of my life in the fashion industry in New York and California, I know what is going on behind the scenes.

In the roles as designer, atelier director, entrepreneur, consultant, and educator inside small independent businesses, venture funded luxury brands, world's largest luxury conglomerate and private universities, I have not necessarily been exposed to the ugliest parts of the industry. However, I have experienced enough to know the excruciating speed of the creation process, even more excruciating work hours that do not allow much of a work/life balance. I have even gotten a taste of how constant exposure to chemicals in the development process can wreak havoc to one's health.

I also know and love the visceral feeling that comes from touching an incredible material, seeing a sculptural garment shape, or collaborating on a masterfully crafted collection. That is when my body reacts with goosebumps and a flooded emotion of awe.

A similar emotion can emerge when I put on a piece of clothing that is just so right for the moment, for my mindset and body. When the image in the mirror and feeling inside of me are so in tune with the message I want to send to the outside world. When the outfit makes me feel so good about myself that I walk taller. Or when it comforts me like a warm hug while curled up on the couch to read or watch a good story unfold.

Unfortunately, most items hanging on the racks of retail stores and inside the plastic bags in massive warehouses create a whole different mental image and visceral feeling.

The purpose of my thesis is to show the importance of us individuals and our unique styles in the complex equation between three different systems:

- Ecosystem.
- Fashion system.
- Human behavior system.

My focus is on:

- Barriers & enablers for our personal behavior change.
- Our relationship with our wardrobe as a tool.
- Wider lifestyle changes as an end-goal.

I am exploring how behavior change in our everyday (life)style can benefit us personally and simultaneously aid our home planet's survival. While my focus is on fashion consumption habits, the potential benefits from becoming more aware of our behavior patterns could spill over to other parts of our life. And the actions followed from that self-actualization could benefit not only our mental wellbeing, but also our financial wellbeing.

In this thesis, I will show **the importance of us individuals in the equation between ecosystem, fashion system and human behavior system.**

Naturally, the complex problem facing our ecosystem's survival cannot be solved by a single individual or buying one less t-shirt. Still, **putting more emphasis on household and local level behavioral patterns may offer new perspectives that cumulatively add up to something meaningful.**

-o-o-

Ihminen ja luonto ovat yhtä ja samaa ekosysteemiä ja siksi omat arjen valintamme vaikuttavat koti-pallomme nykyisyyteen ja tulevaisuuteen. Me voimme siis vielä valita, millaisessa maailmassa me elämme tulevaisuudessa.

Omien tapojen muuttaminen saattaa tuntua kuitenkin hyvinkin hankalalta. On niin paljon valintoja, liikaa miettimistä, tietoa puskee

sieltä ja täältä – ja tuskastuminen on lähellä. Miten minä nyt voisin muka auttaa asiaa?

Mutta sinä voit. Me kaikki voimme!

-o-o-

Human and nature are one and the same ecosystem, and that is why our own everyday choices affect the present and future of our home planet. We can still choose what kind of world we will live in the future.

Changing your own habits may feel quite challenging. There are so many choices, too much thinking, information coming from here and there - and frustration is close. How could I possibly help now?

But you can. We all can!

Fortum - a Finnish energy company in its Pikku Juttu

Pähkinänkuoressa / Little Thing in a Nutshell -blog, 2021.

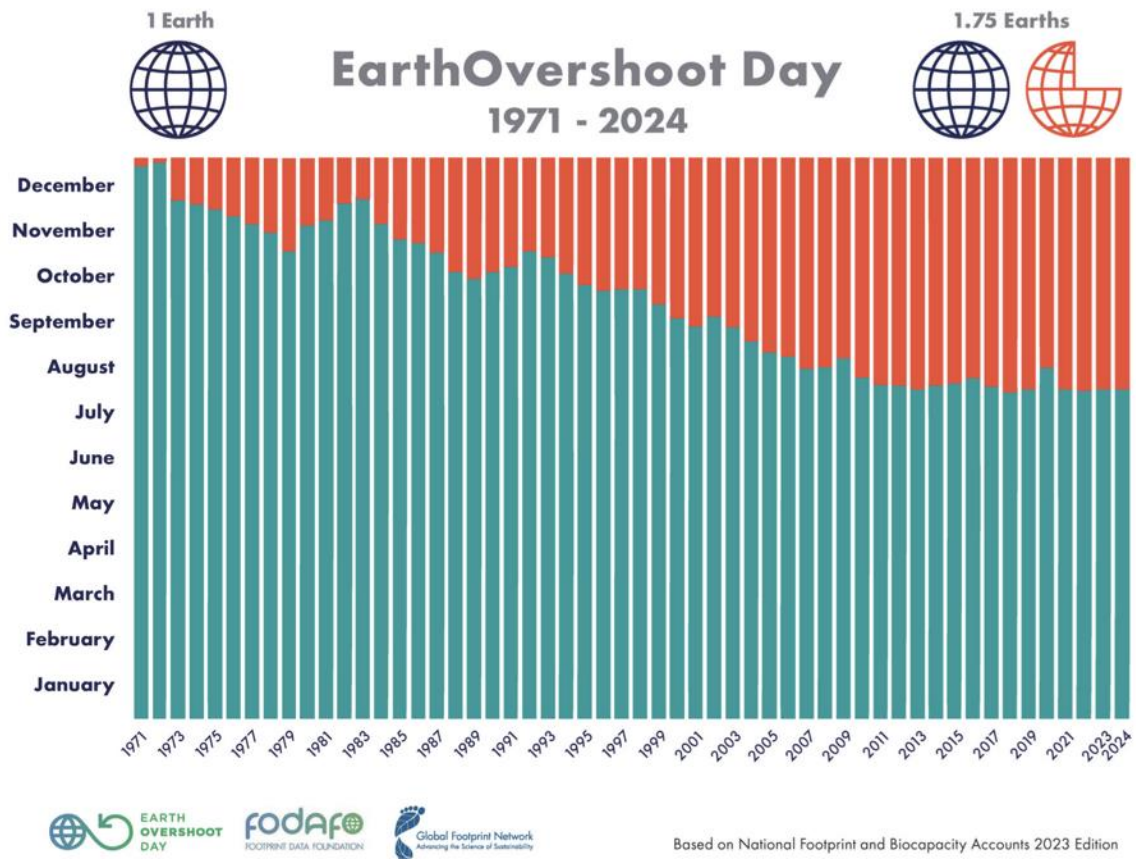
(Translated with help of AI)

1.1 Zooming in from Ecological Overshoot to Fashion Consumption.

Perhaps we should start with the fact that our ability to deliver on sustainability goals is lacking.

The United Nations (UN) defined in 1987 **sustainability** as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (UN/Academic Impact/Sustainability; UN Brundtland Commission/Our Common Future, 1987). Looking at a multitude of metrics, things are not going so well. For example, the **ecological overshoot**, which is defined as **the human consumption of natural resources at rates faster than they can be replenished and create waste in excess of the earth’s assimilative and processing capacity** (Catton, 1980), is a serious red flag.

In 2024, the global overshoot day was August 1st - meaning that our ecological footprint had used up the ecological resources the earth is able to generate annually in about 7 months (Global Footprint Network) and the rest of the year we were compromising the ability of future generations to meet their needs.



Earth Overshoot Day 1971-2024. Image Credit: Global Footprint Network (2024).

This change from needing one planet earth to needing 1.75 planet earths to handle our annual consumption spans from 1971 to now; my entire lifetime. So, to put it bluntly: **our lifestyle and consumption habits are stealing from our own kids' future.**

When thinking about sustainability goals, our focus should not only be on the future generations but also on the vulnerable ones here right now. For example,

The American Academy of Pediatrics has for a decade seen climate change, which is one of the most severe symptoms of ecological overshoot, as the biggest public health problem that human species will face, and it is already affecting children globally (American Academy of Pediatrics, 2015).



Save the children. Image credit: Biff B.

In 1992, the UN held a Conference on Environment and Development (UNCED) also known as Earth Summit. At this summit 178 governments voted to adopt **Agenda 21**, an action plan for sustainable development in the 21st Century. In 2015, the UN's **Agenda 2030**, with the 17 Sustainable Development Goals (SDGs) in its core, re-assessed version of the original agenda became the basis for much of our current government and corporate sustainability development (UN Agenda 21, 1992; UN Agenda 2030, 2015).

In September 2023, the half-way point to 2030, the results were assessed at the SDG Summit in New York. It was determined that only 15% of targets were on track to be achieved and progress on other targets were deteriorating. The back-to-back crises from COVID-19 pandemic to wars and conflicts in many regions including Ukraine, cost-of-living crisis, and climate related disasters

were all contributing factors, but so was the lack of action and implementation at scale (UN Global Sustainability Development Report, 2023).

Although all the UN's 17 Sustainable Development Goals are interconnected and related in some way to the fashion system, the **Goal #12: Responsible Consumption and Production** is the most obviously applicable. It highlights targets for ensuring sustainable consumption and production patterns globally (UN Development of Economic and Social Affairs).



All 17 UN Sustainable Development Goals & Goal #12: Responsible Consumption and Production. Image credit: UN.org / SDG.

The Intergovernmental Panel on Climate Change (IPCC) is the UN body for assessing the science related to climate change. Two decades ago, the IPCC introduced the idea of tipping points in the earth system if global warming exceeded 5°C above pre-industrial levels. However, the most severe effects could be prevented if greenhouse gas (GHG) emissions were substantially reduced by 2030. Later IPCC indicated that temperature increase of more than

1.5°C above pre-industrial levels could unleash far more severe climate change impacts, including more frequent and severe droughts, heatwaves, and rainfall (IPCC, 2014). From these premises the legally binding international treaty on climate change known as **The Paris Agreement** was formed in 2015 (UN The Paris Agreement).

Up to now, a rather limited amount of progress on sustainability goals has been made using financial, technological, and capacity building efforts. Thus, we must consider **new approaches including ones from our lifestyle perspective.**

1.1.1 Fashion system's vast environmental impact.

What does ecological overshoot or climate change have to do with the fashion system, our closets or us as individuals?

Short answer: the fashion industry's growing production quantities as well as our fashion consumption are cause for concern on many levels. Both contribute **to the changing climate due to GHG emissions in addition to wasteful usage of non-renewable resources and freshwater, which increase ocean acidification as well as the ecotoxicity of water and land** (Niinimäki et al. 2020).

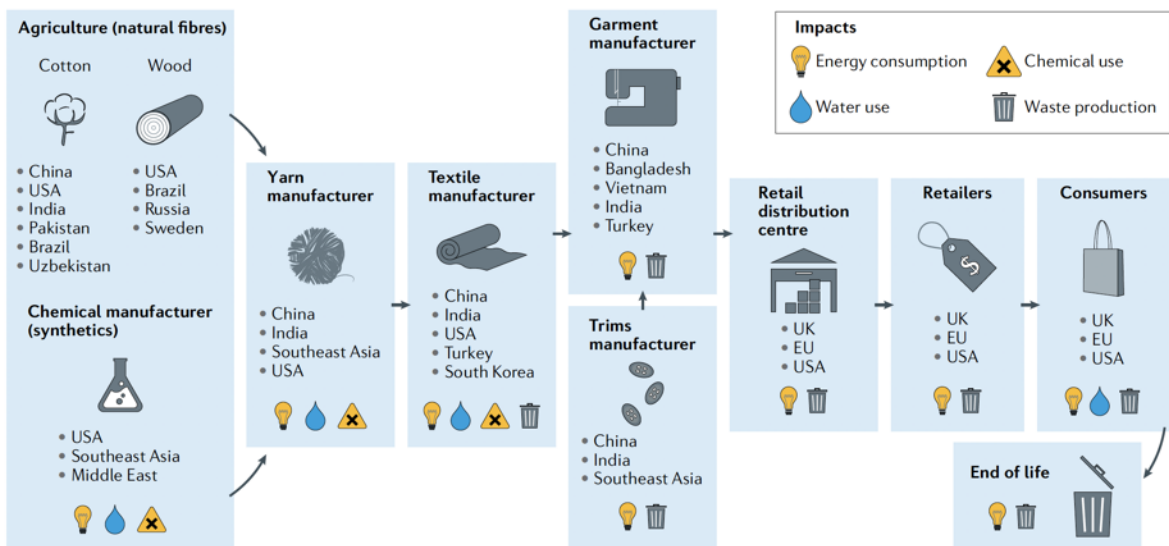
Fashion supply chain functions primarily in **a linear model with beginning, middle and an end** or in the other words **upstream, use and downstream phases**. While mass production of textiles dates back to the 1700's, made possible by agricultural and industrial revolutions, the current scale and speed of it is much more recent. It is additionally complicated by the fashion industry's infamous lack of transparency, making it difficult to even measure the impact.

McKinsey's report from 2016 stated that the number of garments produced annually doubled from 2000 to 2014 and exceeded 100 billion for the first time in 2014 (Remy et al. 2016), by now could be as high as 150 billion items per

year. More accurate or recent data cannot be found because fashion brands, be it high or low-end, are unwilling to share their manufacturing volume data.

The estimates for the fashion industry's stake of all greenhouse gas emissions is 8-10% or 4-5 billion tons annually before the items even get to use phase (Quantis 2018). Different parts of the supply chain consume about 79 trillion liters of water every year and contribute about 20% of industrial water pollution and 35% of oceanic primary microplastic pollution. The process also creates 92 million tons of waste per year (Niinimäki et al. 2020).

When measuring apparel's impact on climate, The Environmental Impact of The Global Apparel and Footwear Industries study concluded that the majority of GHG emissions came before the garment even got into the factory to be made. In the supply chain, fiber production (15%), yarn preparation (28%), fabric preparation (12%) and dyeing & finishing (36%) combined to generate over 90% of the emissions. These processes are energy intensive and still mostly done using coal and natural gas generated electricity and heat (Quantis 2018).



Key stages in garment manufacturing supply chain. Image credit: Niinimäki et al. 2020.

Coming from fashion and talking to people involved in the forest industry here in Finland, one staggering fact stood out: they **count every single tree that goes through their system**. The Finnish Forest industry prides itself for using the best renewable raw material in the world – northern wood – responsibly and efficiently all the way to finished product (Metsä Group). While there are many examples of less responsible players in the forest industry, the joint ventures around cellulose-based closed-loop fiber development may also help bring up the fashion sustainability and transparency game.

Efficiency thinking through innovation has been considered the best vehicle for a more sustainable fashion industry. For example, digitalization can reduce raw material use as well as waste creation. New technologies can create more energy efficiency throughout the supply chain, especially in the yarn production, dyeing and finishing stages. Also, material choices play a significant role in how high an item's ecological impact is (Quantis 2018).

The innovations involving processes from the downstream back to the upstream are creating great promise for increased circularity instead of wasteful linearity. However, **this all requires financial investment**, and the fragmentation of the supply chain does not help incentivize actual change. When brands outsource the majority of their processes, the interest and ability to improve the system is limited; especially, since the fashion industry's prevalent **business models prioritize reduced cost, increased speed, and volume over any climate action**.

Which came first, chicken or egg, may be equally hard question as the one about **overproduction and overconsumption**. But as the fashion industry has gone **from fast fashion to ultra-fast fashion model**; a brilliant example of **efficiency development through technology**, many experts are leaning to the conclusion that currently **overproduction** combined with **effective marketing** and **unbelievably low prices** is driving the **overconsumption**. However, without a buying audience, this race to the bottom would not be a viable business model. The fact that the global per person **textile fiber production**, which has increased from **5.9 kg in 1975** to **14 kg in 2020** and is expected to

be **17.5 kg by 2030** (Statista 2023) is one indication that textile, apparel, and footwear industries have moved **way beyond meeting the basic human needs**.

1.1.2 Fashion system change needs consumer participation.

What an incredible experience it was to witness the internet's gold rush era, a time of free shipping, unlimited returns and influencer recommendations. The opportunities were endless, the VC dollars were flowing, and the legislation was sparse — essentially, anyone with a great idea could make it a reality.

Entire companies were built on this premise and it seemed as though the code had been cracked. We could now shop and read and watch online. It was convenient and affordable. But what we failed to account for was that the products and services offered on digital channels were **created by real people in a physical world**.

Elektra Kotsoni, Deputy Director, Vogue Business.

While ongoing shifts in **EU regulations** and **the Fashion Act in the US** towards a more sustainable and equitable fashion industry are superbly important for lasting change, multiple studies have concluded that **all stakeholders are needed for effective system change**. This is especially true in system change that looks to improve the state of our ecosystem. Some **combination of system efficiency, regulatory change, and demand side**, also known as consumer side, efforts towards **sufficiency** are needed to create meaningful and lasting change.

One example of system change thinking evolution from innovation and efficiency perspective to more holistic approaches is United Nations' Enabling Sustainability Lifestyles in a Climate Emergency, which looks at factors shaping lifestyles and consumption (Akenji and Bengtsson, 2022).

In this study a multilayer framework of 'Attitude', 'Facilitators' and 'Infrastructure' is used (Originally from Akenji and Chen, 2016):

- Attitude reflecting intention.
- Facilitators being enablers.
- Infrastructure shaping the behavioral patterns.

This research concludes that **significant change is more likely to happen when all three work together**. Public policy approaches that can simultaneously create awareness and demand, but also **provide information, incentives** and **access** are integral for lasting change. However, without pro-sustainable 'Attitude', including adjustments in **knowledge, values** and **social norms**, along with **infrastructure** to support it, the change is not possible.

According to **1.5° Lifestyles**, a four-year EU Horizon 2020 funded program, previous attempts to look at the demand-side actions and lifestyle changes needed for limiting temperature increase to around 1.5°C level have been hampered by three key factors:

- There is a very limited amount of data showing how much a proposed change in lifestyle would contribute to climate change mitigation.
- There is limited evidence of public acceptance of drastic changes.
- Ineffective policies often promote individual behavior change without addressing structural constraints (One Point Five Degree Lifestyles).

Just like the research in lifestyle change, the research in fashion system change has been limited for similar reasons. In 2022 **Hot or Cool Institute**, an environmental think-tank specializing in lifestyle change, published a report called **Unfit, Unfair, Unfashionable** (Coscieme et al. 2022). In a recent webinar Katia Vladimirova, one of the writers of the report called this "a milestone report" as it brings **actual data into the vague conversation of consumer's role** in the equation.

Even with limited funding, these better coordinated efforts are a foundation for concrete and practical guidance, we all could make more positive lifestyle choices, including in our wardrobes. As we can see, **the bigger challenge is**

the willingness to change our own behavior to avoid drowning in floods or roasting in hell-like circumstances on our human-changed planet.

After all, a full rack of most fashionable garb will unlikely shield us adequately.



Banksy: Sorry! The lifestyle you ordered is currently out of stock. December 2011, Poplar, London. Image credit: Wooster collective.com

1.2 Research Goals and Questions.

The purpose of my thesis is to show **the importance of us individuals** in the complex equation between three different systems: **ecosystem, fashion system and human behavior system.**

Naturally (pun intended), the ecosystem is the umbrella under which the other two operate, but because **our thinking is compartmentalized** and **our actions happen in silos**, it is good to do a refresher course of things that we perhaps grasped better in pre-school than we do later in life. While no individual alone can solve the complex problem behind biodiversity loss, ocean acidification, pollutants and climate change or overconsumption, but by putting **more focus on the household and local level behavioral patterns may offer new perspectives and cumulatively add up to something quite meaningful.**

Thus, my focus is on looking at **barriers and enablers** for our personal behavior change, using **our relationship with our wardrobe as a tool** and **wider lifestyle change as an end-goal**. In my opinion, the key to lasting change is tied to finding a variety of motivators and delivery methods for the message.

An important goal for this thesis is to lay a foundation for my research and consulting company, **State of Sisu**. The aim is to find the most promising parts of behavior design to focus on as State of Sisu ventures into the real world with a bootstrap budget and passion for fashion and the wellbeing of our ecosystem.

Thus, the research questions are:

- Would we change our behavior if we felt, thought, and acted like the ecosystem was our boss?
- How to shift (fashion consumer) behavior toward style-centric sufficiency thinking?

1.3 Structure of Thesis.

The goal of the thesis is to examine sustainability challenges and possibilities at the intersection of ecosystem, fashion system and human behavior system. Equally importantly, I want to provide State of Sisu, my research and consulting company, with informed direction for its consumer education endeavors. This must be in line with the financial realities, as well as time restrictions, that both State of Sisu and I, as a solo entrepreneur, have.

The chosen topic has some anchor points in longer term research. However, especially as the regulatory landscape is shifting rapidly, it has made my research both **timely and fast moving**. There have also been several adjustments in my approaches along the way, even though the core principles, like human centric focus and COM-B framework, have remained the same.

This thesis is divided into seven chapters:

- **Chapter 1** introduces the thesis topic through a wider lens of ecological overshoot and explores the challenges that our ecosystem is currently facing. Then zooming in to more specifically look at what part the fashion system and consumer participation play in this equation. This chapter also introduces the research goals and questions.
- In **Chapter 2**, the theoretical background is discussed. This introduces **COM-B, PRIME and Behavior Change Wheel frameworks**. COM- B acronym stands for Capability, Opportunity and Motivation for Behavior or Behavior change. PRIME is more specifically a framework for understanding different layers of motivation. Behavior Change Wheel is a wider framework for designing behavior intervention: COM-B in the center, surrounded by intervention functions and policy categories. While this thesis mostly focuses on looking at consumer behavior through the COM-B lens, the other two frameworks are introduced based on their vitality for envisioning the bigger picture.

This chapter covers the theoretical background of fashion production, fashion consumption and regulation that is trying to temper both. **The behavior SHIFT model** is introduced when the barriers and enablers for human behavior change towards pro-environmental behavior are explored. Marketing and current business models are discussed as the external barriers are explored.

- In **Chapter 3**, State of Sisu, my research and consulting company is introduced. State of Sisu is being incubated based on the conundrum I developed about the fashion industry over the years as a fashion designer, atelier director and educator. The concept of the company has been further formed throughout the thesis research and will be properly launched after I wrap up this thesis.
- **Chapter 4** focuses on explaining the methodology. The thesis uses qualitative research methods including lived experiences. The data was collected using group and expert interviews. Additionally, observation was used to gather relevant information and to understand the industry landscape. The data analysis with behavior design and the COM-B framework is also covered. At the end, the reliability of the research is discussed.
- In **Chapter 5**, the research results are explored through the COM-B lens. This includes the capability, opportunity and motivation factors in behavior change towards more responsible fashion and textile consumption. In capability both physical and psychological parts are considered. In opportunity both physical and social parts of it are viewed. Then both automatic and reflective sides of motivation are explored. From these findings ideas for potential behavior change are discussed.

- **Chapter 6** will sum up the findings by thinking back to the SHIFT framework for more sustainable consumer behavior, but also adding the idea of self-care and happiness as motivation and foundation for change.
- **Chapter 7** brings this thesis to conclusion with the outlook for ecosystem, fashion system, State of Sisu and us all populating this planet.

2 Theoretical Background

Definitions for the key terminology used throughout the thesis:

- **Ecological overshoot:**
The human consumption of natural resources at rates faster than they can be replenished and create waste in excess of the earth's assimilative and processing capacity (Catton 1980).
- **Pro-environmental behavior or climate change mitigation behavior:**
The commission of acts that benefit the natural environment and the omission of acts that harm it (Lange 2019).
- **Sufficiency thinking:**
Sufficiency is a 'golden' middle ground between lack and excess (Manno 2014). Consideration of both, an end in itself and a means for bringing consumption and production within ecological limits (Jungell-Michelsson & Heikkurinen 2022).
- **Demand-side solution:**
Policies, interventions, and measures that modify demand for goods and services to reduce material and energy requirements and associated greenhouse gas (GHG) emissions (Sugiyama et al. 2023).
- **Behavior design:**
An approach to understanding human behavior and how to design for behavior change (Stanford, Behavior Design Lab).

2.1 COM-B, PRIME and Behavior Change Wheel.

As a designer by training, I am extremely interested in **behavior design**.

However, first it has been crucial for me to better understand:

- **how our behavior is formed.**
- **how the different parts of the system interact.**

Behavior researchers Michie, van Stalen and West, analyzed 19 common behavior change frameworks, discovered that none of them were simultaneously comprehensive, coherent, or clearly linked to an overarching model of behavior. For example, the often-used Theory of Planned Behaviour did not address the important role of impulsivity, habit, self-control or emotional processing, which in my mind is a key when looking at fashion consumption (Michie et al. 2011).

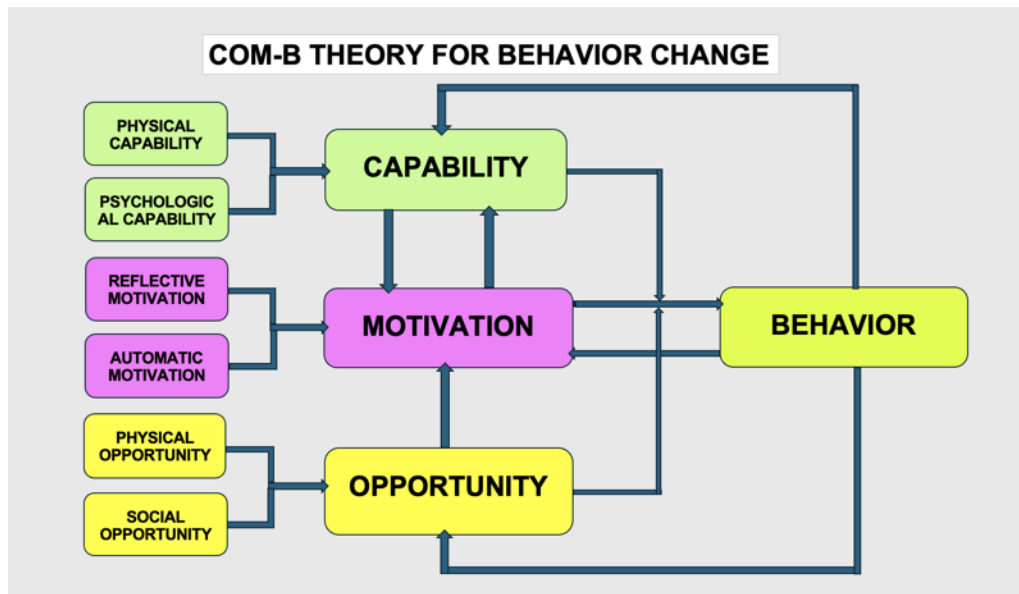
According to Michie et al.:

- **behavior change interventions are coordinated sets of activities designed to change specified behavior patterns.**

Through the taxonomy of the 'universe' of behavior change techniques, they determined that to be effective, behavior change intervention needs to capture mechanisms in the internal, both the psychological and physical as well as external environments. Thus, they went beyond behavior theories to the principles of US criminal law and discovered that under the law, to prove that someone is guilty of a crime, a person must show three things: means or capability, opportunity, and motive. Then going back to behavior theories, they built on the conscious choice of motive and added the subconscious mechanisms such as habits involved in motivation (Michie et al. 2011).

The **COM-B model** of behavior is widely used to identify what needs to change in order for a behavior change intervention to be effective. It identifies three factors that need to be present for any Behaviour to occur: Capability, Opportunity, and Motivation. These factors interact over time so that behavior can be seen as part of a dynamic system with positive and negative feedback loops.

West and Michie, Professors of Health Psychology at University College London, 2020.



COM-B theory of Capability, Opportunity and Motivation for Behavior Change. Chart adapted from info based on West and Michie 2020.

The COM-B model is based on the observation that **at any moment**, a particular behavior will occur only when we have the capability and opportunity to engage in the behavior and are **more motivated to engage in that specific behavior than any other behaviors** (West and Michie, 2020). **Only when all the components – Capability, Opportunity and Motivation are adequately supported is behavior or behavior change possible.** The support for these areas can also lower the attitude-behavior gap or as this framework calls it; **intention-behavior gap** (Michie et al. 2011).

Motivation is a core part of COM-B model and PRIME Theory of motivation provides a framework for understanding how reflective thought processes (Planning and Evaluation processes) and emotional and habitual processes (Motive and Impulse/inhibition processes) interact at every moment leading to behavior (Responses) at that moment. *West and Michie, 2020.*

According to West and Michie, **motives are feelings of 'want' or 'need':**

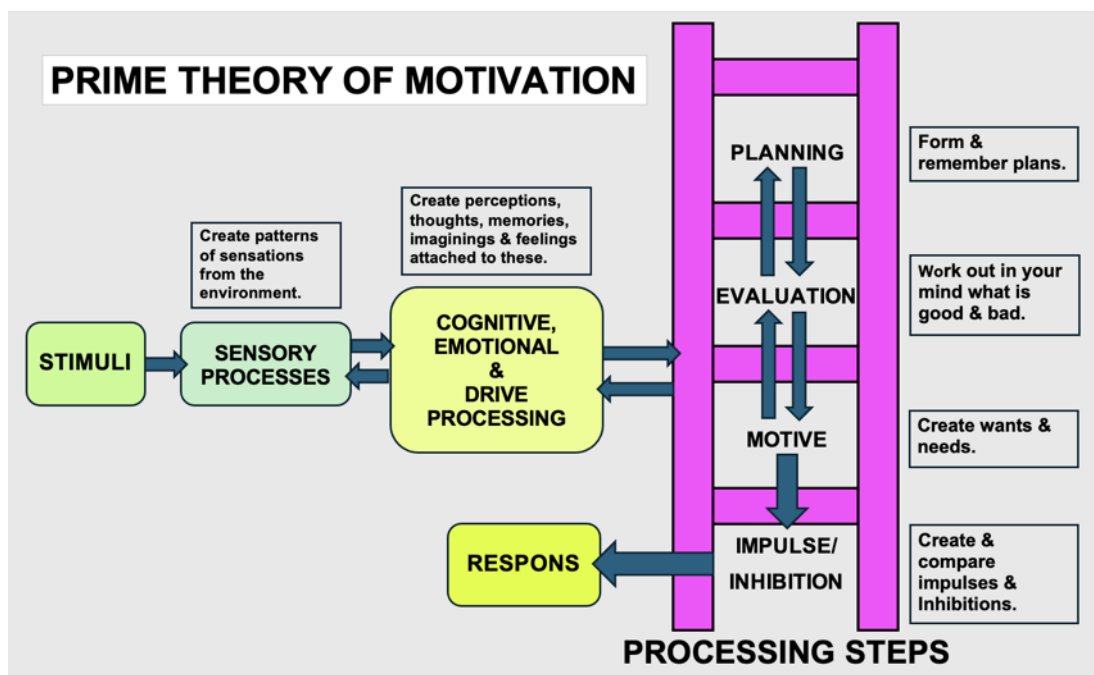
- Wants are driven by attraction that arises from the **anticipation of pleasure or satisfaction.**

- Needs are generated by **anticipated relief from discomfort, be it mental or physical.**

Thus, **wants and needs lie at the heart of all goal directed human behavior.**

That is also why the first winter coat in cold climates serves as a relief for an important need. And the tenth winter coat is more likely acquired from a personal pleasure perspective.

PRIME theory of motivation recognizes that **at every moment, we act in pursuit of what we most want or need at that moment**, which is a fundamental principle of human behavior. When working on behavior design by changing motivation, a key target is **the momentary wants and needs** that will be experienced at the very moment that the behavior becomes acute (West and Michie, 2020).



Structure of Human Motivation according to PRIME theory.

Chart adapted from: West and Michie 2020.

While PRIME is not a replacement for more specific motivation theories, it works well for demonstrating how our brain navigates through automatic and reflective motivation processes. The PRIME chart visually demonstrates how **our thought process 'climbs up a ladder' for a more considered response if we don't act on our first impulse.**

If we go up to **Evaluation Processes**:

- We are using our mental capacity to differentiate between good and bad.

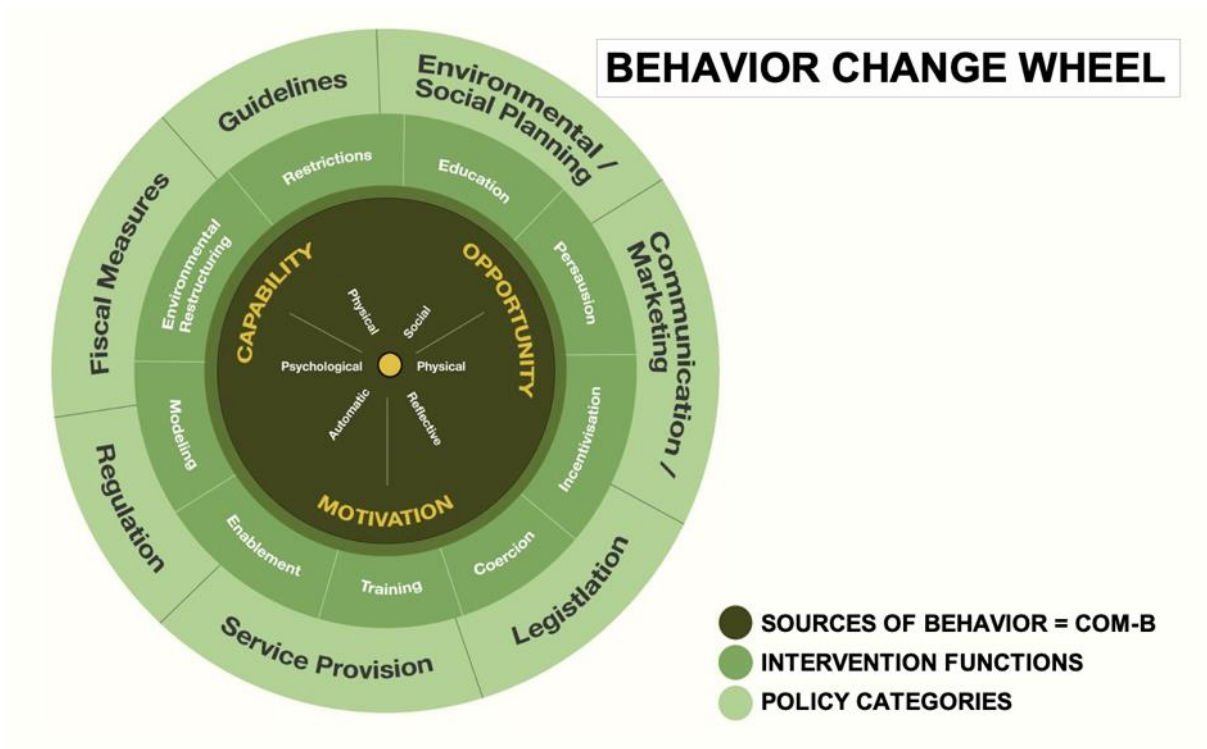
And if you go all the way to 'the top of the ladder' to **Planning Processes**:

- We form and remember our plans.

This means that we have a lot more than habit and instinct to work with.

Since the COM-B method is accurate from a scientific perspective, but also fairly straight-forward, it can even be used (to a point) by someone without a deep background in psychology or behavioral science. There is a vast amount of evidence that this model, especially when used in its cluster of frameworks, has been effective in behavior design. Given that, I decided to use the COM-B model to identify **the barriers and enablers or facilitators for more mindful behavior - consuming less and in a more considered way.**

It is important for **the potential future research** to consider the bigger picture where intervention functions; activities aimed at changing behavior and policy categories; actions on the part of responsible authorities that enable or support the desired intervention, can influence holistic system change. For this purpose, Michie et al. have created **Behaviour Change Wheel (BCW)** with the COM-B at its center. BCW provides the sources of behavior with COM-B, surrounded by intervention functions and policy categories, together aiming for system change (Michie et al. 2011).



The Behavior Change Wheel (BCW) with COM-B in the center.

Image by An AI Story adapted from 'The BCW: A Guide to Design Interventions', 2014.

2.2 From Doom to Demand-Side Solutions.

Most of the research done about limiting global warming to 1.5°C, as outlined in the Paris Agreement, examines how to reduce greenhouse gas emissions and capture carbon dioxide. **Lifestyle changes** as part of the equation, on the other hand, **have been understudied**. A recent study by Cap et al. concluded that while **technological change** can substantially reduce emission, they are **ultimately insufficient** to meet the 1.5°C target by 2050.

Technological improvements can neutralize emissions associated with increasing consumption but do not offer enough mitigation potential to limit overall emissions to 1.5°C compatible levels.

Addressing consumption changes due to economic growth while simultaneously harnessing the decarbonization and development benefits of economic productivity will be critical to meet emissions targets. *Cap et al., 2024.*

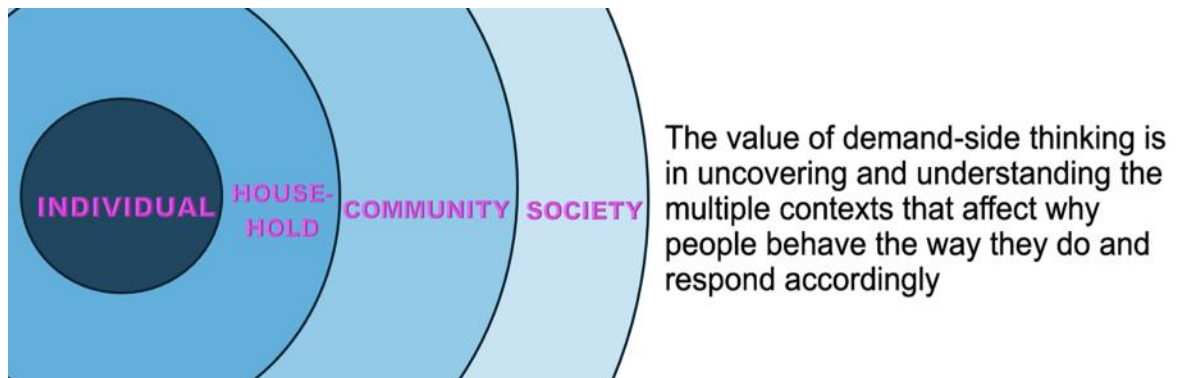
Given this, no matter what kind of greenhouse gas reduction intervention and carbon dioxide capture schemes are introduced, the reality is still rather dire. In fact, even though our understanding of the situation is limited, it is **an existential threat to civilization**. Many scientists argue that there really is no time left to avoid the tipping points and the only thing we can control, to some extent, is the rate at which damage accumulates (Lenton et al. 2019).

The research on **demand-side** thinking or action in ecological overshoot mitigation has been limited as the focus has mostly been on supply-side technology. Sugiyama et al. define “**demand-side solutions**” as **policies, interventions, and measures that modify demand for goods and services** to reduce material and energy requirements and associated greenhouse gas (GHG) emissions. These solutions can also contribute, directly or indirectly, to improved wellbeing and living standards for us (Sugiyama et al. 2024).

Demand-side solutions include strategies that target:

- Technology choices.
- Consumption.
- Behavior and lifestyles.
- Coupled production-consumption infrastructures.
- Service provisions.

They are being studied by different disciplines including psychologists, behavioral economists, sociologists, and anthropologists (Creutzig et al. 2018).



Demand-side thinking: Individual, Household, Community, Society. Image adapted from Design for Health Organization lecture material.

Additionally, an increased amount of research using **consumption-based emissions accounting**, which includes both:

- **direct emissions & the embodied emissions of imported goods.**

This is starting to show the true effects of our behavior in the Global North. Not surprisingly, it is **the high-income countries that need to make the most drastic GHG reductions** and **the high-income earners in the high-income countries need the most extreme habit reformation**, including in their wardrobes (Coscieme et al. 2022).

“World Scientists’ Warning: The Behavioral Crisis Driving Ecological Overshoot” explores the behavioral drivers for overshoot - our consumption beyond the earth’s capacity and provides evidence that **overshoot itself is a symptom of a deeper, more subversive modern crisis of human behavior**. In this research **economic growth, marketing and pro-natalist**, such as government support for higher birth rate, are seen as **the three drivers of the behavioral crisis**.

These three drivers then directly **impact the three ‘levers’ of overshoot**:

- Consumption.
- Waste.
- Population.

The current emphasis for overshoot intervention is resource intensive (e.g. the global transition to renewable energy) and single symptom focused. Indeed, most mainstream attention and investment is directed towards mitigating and adapting to climate change.

Even if this narrow intervention is successful, it will not resolve the meta-crisis of ecological overshoot, in fact, with many of the current resource-intensive interventions, it is likely to make matters worse. Psychological interventions are likely to prove far less resource-intensive and more effective than physical ones.” *Merz et al., 2023.*

We cannot ignore the role that population growth plays in ecological overshoot. In 1971, when our consumption was still in line with the planet’s capacity, the world population was around 3.8 billion compared to now when it is over 8 billion (Worldometer). In fact, it had taken us humans about **250,000 years to reach a global population of 1 billion; in 1820, and 200 years to go from 1 billion to 8 billion.** Such massive population growth in many ways is tied to the increased access to fossil energy (Merz et al. 2023).

However, the magical natural resources that allowed humanity to flourish may also be ending the boom cycle with an epic bust. It is also worth noting that the population growth and increase in per capita real gross domestic product (GDP) have canceled out most climate gains from renewable energy and efficiency (Chaurasia. 2020). That said, population growth is not the focus on this thesis, yet essential to be recognized here.

Mertz et al. confirm the short-sightedness of us humans and our maladaptive behavior traits. The human behaviors that started as adaptive in our evolution were later exploited to serve the global industrial economy to increasingly unsustainable levels. Additionally, the marketing industry has moved from functional differentiation to impulse manipulation turning the whole thing from adaptive to self-defeating. However, **the same tools used to manipulate our desires, values and social norms toward unnecessary consumption could also be used for building a more sustainable world** (Merz et al. 2023).

Using marketing and storytelling techniques to influence human behavior towards a more pro-environmental direction may raise some ethical concerns, but it could also be the necessary antidote to current marketing message and algorithm manipulation. My personal belief is that the best chance of having an impact on the survival of our planet is to pull from our own fields of expertise and collaborate with each other. Since my professional life has revolved around fashion, design and education, that is my main toolkit for contemplating paths toward better tomorrow, without forgetting to be critical about my own actions.

2.2.1 Industry & regulatory parts of the equation.

Reshaping of the supply chain is an opportunity, not a challenge. If you take critical raw material supply chains, found in developing countries, who did not benefit as much from the 1st phase of integration into the global economy. (These locations) have two advantages: **raw materials and green energy**. Now you can develop these supply chains, bring in new sources of growth, create new employment, and lift people up from poverty in these countries.

So, those are some good opportunities and **there is hope**. *Dr. Ngozi Okonjo-Iweala, Director-General of WTO.*

In a panel discussion regarding global economic outlook in World Economic Forum, Davos, Switzerland, January 22, 2024, Christine Lagarde; former managing director of International Monetary Fund (IMF) and current European Central Bank President mentioned that still in 2023 globally consumption was a driving force for growth. However, partially because of our diminishing savings from various global and local economic factors, consumption is not as strong of a force as it used to be.

Dr. Ngozi Okonjo-Iweala, the head of the World Trade Organization (WTO), brought up geopolitical uncertainties that are partially climate related, a big

unknown for the future of global trade. In the discussion the concept of new normal, where geopolitical volatility, AI technology and fragmentation are all forcing **new structural system reforms**. But as Dr. Okonjo-Iweala pointed out, it is the global trade, including digital trade, that has given the ability to solve problems arising from that new normal. Bright spots include green trade that has tripled in value from 2000 to \$1.9 trillion (World Economic Forum 2024).

More specifically **in the fashion industry, the misinformation and lack of transparency are fundamental problems**. Fashion Revolution, the world's largest activist movement founded after the devastating Rana Plaza factory collapse, has published Fashion Transparency Index since 2017. The 2023 edition assessed public information from 250 world's largest fashion brands and retailers, which revealed that 88% of the brands didn't disclose their annual production volume and 99% of brands didn't disclose a commitment to reduce the new items they produce. This secretive behavior goes across the board from high priced luxury brands to low priced fast fashion brands. In 2024, while only 1% of the 250 fashion brands declined to participate, only 48% completed the questionnaire and got the opportunity to highlight any meaningful changes. There obviously can be many reasons for lack of participation, however typically the brands who are investing in responsible supply chains are more eager to share their progress (Fashion Revolution, 2023 & 2024).

The European Environment Agency (EEA) estimates that out of the total discarded textiles in Europe only 40% is collected. The remaining 60%, which amounts to approximately 1,7 million tons per year, is incinerated. Out of that 40%, 10% is resold in the country it is collected in, 10% is resold in another European country and the rest is exported mainly to Africa and Asia (European Environment Agency, 2024). In their research Chandran et al. found that of the 25% of clothing that is 'supposedly reused' or resold, 75% of it ends up in other countries. This causes a huge waste problem, especially from oil-based fibers like polyester that **create a plastic pollution burden** in the Global South.

EU policymakers are in the midst of creating a direct ban on larger brands destroying returned and unsold clothing and footwear. According to the EEA,

the growth of online shopping as well as flexible and often free returns, have changed consumer shopping habits. This resulted in an increased volume of fashion goods being destroyed even before anyone had worn them, making it the worst version of linear ‘take-make-waste’ approach (European Environment Agency, January 24th, 2024).

Based on available studies, approximately **4-9% of all textile products put on the market in just Europe are destroyed before being used**, which in the worst case scenario adds up to almost 600,000 tons annually (European Environment Agency, January 24th, 2024). So, whatever the exact figure of fashion items produced may be, these wasteful practices prove that it is much too high.



The banks of Nairobi River. Image Credit: Take-back trickery, Changing Markets Foundation.

The renaissance of ‘nearshoring’ and local production for the fashion industry in the Nordics is easier to imagine than ever before. Innovations like the cellulose based fibers here in Finland have required both; out of the box thinking and understanding of the existing infrastructure, including use of the side streams from neighboring facilities and certified wood from local forests (Metsä Group, Kuura). However, unless the pilot programs are scaled to financially viable

production with additional infrastructure nearby, these exciting circular business models may die on the vine.

There is no one process or player that can completely on their own produce these new alternative fibers—for example—to fill the predicted cotton gap; so they must rely on collaborations, partnerships, and each other's processing abilities.

Anna Gartton, Post-Consumer Textile Expert.

More generally, the voluntary approach from the fashion industry for circularity and supply chain traceability has been lackluster to say the least. The current regulatory environment is creating a landscape where system change is inevitable. Especially in Europe, the **EU Strategy for Sustainable and Circular Textiles** is moving ahead with an ambitious plan to create a greener textiles sector and a sustainable ecosystem for fashion by the end of this decade (European Commission. Energy, Climate change, Environment).

These innovative EU strategies include **new design requirements** for longer lasting items, repairability and minimum recycled fiber content. Consumers will get clearer information about their fashion purchases when **Digital Product Passports** come into effect. The EU is also working on producer and importer responsibility for items they sell along with review of the waste directives (European Commission. Energy, Climate change, Environment).

Then there is the **Green Claims Directive** (GCD) which will protect consumers from 'greenwashing', where vague or misleading sustainability claims are used without data or third-party verifications (European Parliament. Green claims directive. March 5th, 2024). In addition, **the Corporate Sustainability Due Diligence** (CSDD) directive, after years of back and forth between member states, finally received a qualified majority of votes on April 24th, 2024, by the Committee of Permanent Representatives of the Governments of the Member States (Coreper). CSDDD sets legal obligations for large companies with significant activities in the EU region to do their human rights and environmental due diligence in their whole supply chain, including contractors and sub-

contractors. While The European Parliament will still have to approve the content of the Directive, this is a huge positive leap forward (Valtioneuvosto 2024).

Additionally, extensive research on microplastics (MPs) is being funded by the EU. The purpose of these studies is to gain a better understanding of the risks that massive synthetic clothing production among other sources create for the ecosystem and our own health. While the extent of the problem is not fully understood, I would speculate that it is not a good thing when babies start their lives drinking mother's milk that contains microplastics (Ragusa et al. 2022). Additionally, the microplastics can be found consistently in male reproductive organs be it human or a dog (Hu et al. 2024).

Of course, just like in any other drastic regulatory changes where the people from outside of the field are in charge, the pendulum can swing too far or too slow. Thus, some growing pains can be expected, but from the perspective of our ecosystem, this is a welcomed direction.

2.2.2 Consumer behavior part of the equation.

Multiple studies have demonstrated that per-capita energy consumption in affluent countries could be significantly decreased while our living standards would still be maintained (Trainer 2019). More specifically, it is the high-income earners in the high-income countries that use more than their fair share of resources. Perhaps it is why they should adjust their direct and indirect energy use for the sake of equality and our ecosystem (Oswald et al. 2020).

Oswald et al. poignantly remind us that when we think about energy, we may forget that it is not purchased or used for its own sake, but rather for the services it delivers. Some of these end-use services are essential for our lives, but others are discretionary luxuries. For example, heating and cooking require energy and are fundamental to our wellbeing and survival. Also, health and education infrastructures require energy and are fundamental for our societies.

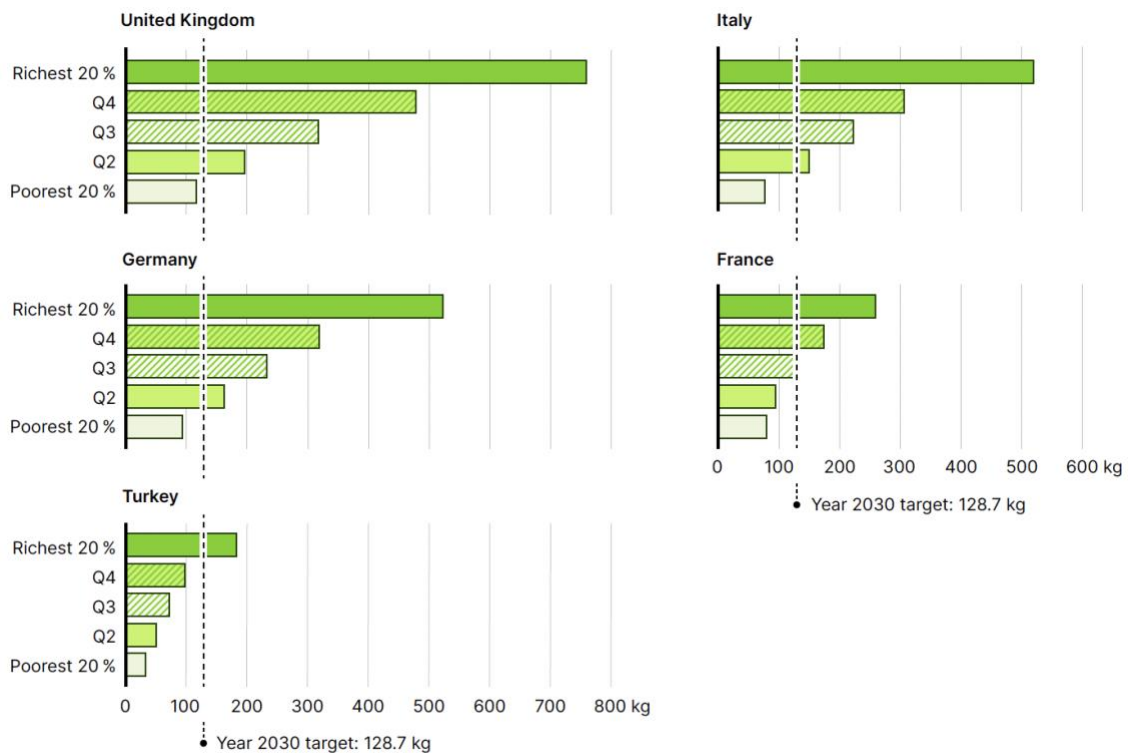
By contrast, our vacation travels and entertainment equipment, while important to our personal enjoyment, are not fulfilling essential needs (Oswald et al. 2020).

Researchers have shown that the potential for climate change mitigation through the reduction in emissions of one billion high emitters is far greater than the threat of granting the poorest 2.7 billion a basic level of emissions that comes with decent living standards.

Oswald et al. 2020.

The same thinking applies to our fashion consumption. In the G20 the highest 20% of income earners cause over 40% of the national carbon footprint, whereas the lowest 20% cause 6-11% of it. The richest 20% would need to reduce the fashion consumption footprint by 83% in the UK, 75% in Italy and Germany and 50% in France by 2030 to meet the 1.5-degree target (Coscieme et al. 2022). So, while all consumers need to make some changes, the concept of poor people buying cheap things is not the key dilemma.

When doing calculations on our consumption, the use of **consumption-based accounting, which includes both direct emissions and the embodied emissions of imported goods, shows the true effects of our behavior.** According to the Unfit, Unfair, Unfashionable report, 84% of greenhouse gas (GHG) emission in G20 fashion consumption occurs during upstream production from material development to garment manufacturing. **The negative impact stays where the upstream production happens, whereas the goods do not.** The true environmental and social impact from goods created “somewhere there” and purchased by us from our local stores or from our favorite online retailers are not as clear from **territorial emission accounting** which is production based (Coscieme et al. 2022).

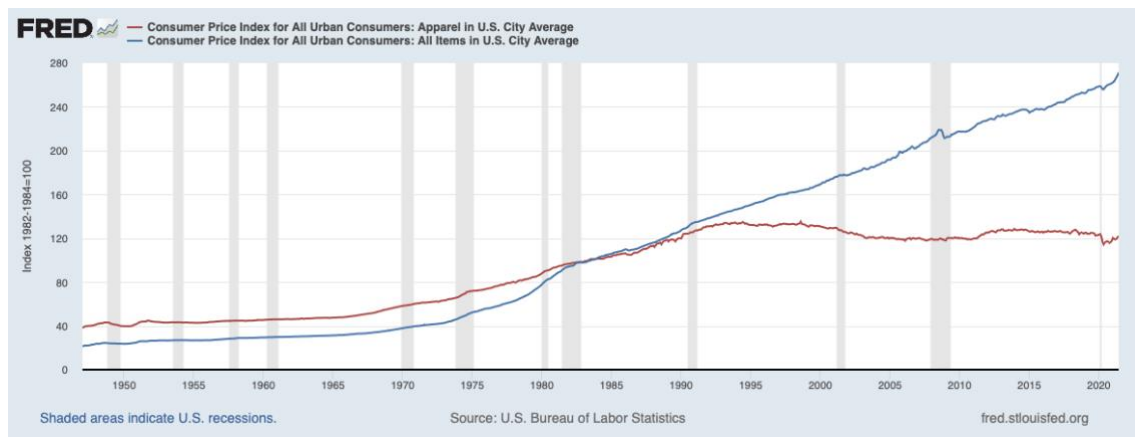


Total fashion consumption carbon footprint in different countries and different income levels. Image Credit: Unfit, Unfair, Unfashionable by Hot or Cool Institute.

Reminder of our actions is a quick visit to our own closets to see how many of the clothes say for example “**Made in China**” or “**Made in Bangladesh**” rather than “**Made in Finland**” or “**Made in EU**”, except it really is not that simple. Made in EU is not a guarantee for a problem-free supply chain. And in reality, the made-in tag only reveals where more than 50% of the garment was assembled, not where the fiber came from or where all the polluting and energy heavy material processing happened. The best manufacturing results are found where talent and infrastructure meet, but that is not necessarily what a brand is willing to pay a lot for. And nor is the end customer.

In 2016, Remy et al. determined that **an average consumer bought 60% more clothes than they did in 2000 but kept them half as long**. While fashion related production and sales volumes have increased, households in G20 countries spent 6% of their total expenditure on fashion in 1995 but only 4% in 2021 (Coscieme et al. 2022). So, while overall consumer prices have increased,

fashion has gotten less expensive. The following chart shows the difference between consumer price index in all items versus apparel from late 1940's to 2020 for urban consumers in the US. The difference in price patterns for fashion from all other consumer goods in the past 30 years could be because we have discovered a magic wand for creating fashion. Then again, the unfair activities in the supply chain can perhaps offer a more accurate explanation.



US consumer prices – All items vs. clothing items from the past 70 years.

Image credit: U.S Bureau of Labor Statistics.

According to the statistics from Eurostat, the average consumer in France spent 660 € on clothing and footwear in 2022, whereas the averages in Italy and UK were around 1 100 €. Luxemburg, one of the capitals of EU as well as investment management center, is in a league of its own, with annual spending of 1 780 € in 2022, because the overall spending power and appetite for fashion is there.

COUNTRY	2011	2015	2019	2020	2021	2022
FRANCE	690 €	680 €	660 €	550 €	610 €	660 €
ITALY	1 090 €	1 040 €	1 090 €	870 €	930 €	1 100 €
UK	960 €	1 320 €	1 230 €			1 060 €
FINLAND	870 €	870 €	900 €	710 €	800 €	860 €
LUXEMBURG	1 600 €	1 660 €	1 640 €	1 470 €	1 660 €	1 780 €

Money spent annually per capita on clothing and footwear in Europe.

Information from EuroStat and the Office for National Statistics in the UK.

Key, in my opinion, is to **separate the idea of shopping in quantities from shopping in monetary value**, or the reduction in one versus the other. What

our personal discretionary spending on fashion items is, typically dependent on what is left after our mandatory spending and (potentially) savings. In order for fashion consumers to reach the target carbon footprint of no more than 128.7 kg of CO₂e per year, a significant reduction of garments purchases is required. The good news is that **reducing our garment purchases in quantity by 25-30% will have no effect on the ability to fulfill our clothing needs** (Coscieme et al. 2022).

In simple terms, **the amount of money we spend annually on clothing and footwear does not have to change, but the number of items purchased does**. By spending our money more wisely rather than shopping for 'frivolous discretionary items' would also give us better value for our hard-earned money. Additionally, **it would send a message to the fashion industry, not just in theory before our intention-behavior gap kicked in, but also in reality**.

Going back to the data in Unfit, Unfair, Unfashionable; France sticks out having significantly lower per capita carbon emissions than for example UK, Italy, or Germany including among the higher earning individuals (Coscieme et al. 2022). This is partially a result from long term legislative efforts made in France to push the industry to a less wasteful direction: **extended producer responsibility (EPR)** has been in place since 2007 and in more recent years other changes have been made with **“Anti-Waste Circular Economy Law” (AGEC)**, ban for destroying unsold items, and most recently bill for taxing ultra-fast fashion and banning fast fashion advertisement, similar to harmful things like cigarettes and alcohol (Service-Public France 2020; Gallage-Alwis et al. 2024). Although this may be **partially motivated by protectionism, it also shows that intervention techniques between legislation, industry and consumers can create change**.

2.2.3 Sustainability & sufficiency in our wardrobes.

'Sufficiency' is a useful term, particularly in sustainability theory and practice, as it complements the field's excessive focus on

'efficiency' and utilitarian maximization. While efficiency measures may decrease a product's per-unit environmental impact, they are less likely to reduce its overall anthropogenic environmental impact due to the rebound effect unless actions complement measures of sufficiency. *Tommi Lehtonen & Pasi Heikkurinen, 2022.*

Lehtonen and Heikkurinen mention that **sufficiency** is often treated as an abstract idea of adequacy, either a vehicle for voluntary simplicity or ascetic existence supercharged with some morals. Or that sufficiency refers to questioning the ethics of 'always aiming to have more and better' without proper consideration for who should set restrictions or how. They also acknowledge that **sustainability** can be considered 'a utopian and a technocratic fantasy'. However, 'the notion of sustainability may work as an important umbrella concept uniting people for a shared cause'. They define sustainability broadly as **a condition that enables the continuity of diverse earthbound life** (Lehtonen & Heikkurinen 2022).

Lehtonen and Heikkurinen argue that while sustainability and sustainable development are typically considered as comprising **ecological, social and economic parts, ecological sustainability is the foundation of everything else**. In their view, **if ecological sustainability is insufficiently addresses, then discussions around the other two sections are useless**, but continue:

However, we also see that it is important that the other two dimensions, the social and economic, are on a sufficient level so that addressing the ecological dimension is meaningful.

In a literature review, Jungell-Michelsson and Heikkurinen determined that **sufficiency is understood as both an end in itself and a means for bringing consumption and production within ecological limits**. According to Manno et al., **sufficiency is a 'golden' mean or middle ground between lack and excess** (Manno et al. 2010). When Lehtonen and Heikkurinen dove in to establish a relationship between sufficiency and sustainability, they weighed two sides of sufficiency; **the condition and quality of adequacy** – not too

much, nor too little, and **the circumstance** under which **lack of** as well as **overabundance of something** – such as clothing – **is avoided**.

Additionally, they created **three models of sufficiency for sustainability**:

- **The limits model of sufficiency:** sufficiency as objective limits of how much production and consumption is enough. This model distinguishes between minimum level and maximum limits.
- **The preference model of sufficiency:** sufficiency as subjective preference (moderation, restriction, self-control, self-regulation). Sufficiency as a lifestyle choice may lead to happiness and set an example for others.
- **The balancing model of sufficiency:** sufficiency as balance between quantity and quality. This model has a moral component and is associated with moderation and equity. It integrates both the limit (based on duty-based ethics) and the preference (based on preference utilitarianism) models.

The first two models have to do with avoiding either excess or lack of something whereas the third model relates to **achieving something such as right ratio or amount per Goldilocks' example** (Lehtonen & Heikkurinen 2022).

The Unfit, Unfair, Unfashionable report goes deeper into fashion specific sufficiency and applies the concept of “**fair consumption space**” to the matter:

One key question that contributes to defining socially acceptable levels of fashion consumption is; what would be **the minimum amount of clothing sufficient to fulfill a person's dressing needs if all items are put to active use**.

In the 1950's a guide for good dressing for an adult woman living in a city referred to **42 pieces of garments** (excluding accessories and underwear) as being enough to cover a whole year's needs. **In the 1960's**, an average French wardrobe consisted of around 25 outfits, and **40 pieces in total** (Coscieme et al. 2022).

Coscieme et al. also explore more recent studies of sufficiency thinking versus reality of our fashion consumption. For example, wardrobe size in Netherlands ranges from 70 to up to 429 (excluding undergarments) while proposed

sufficiency wardrobe would be 80 pieces (Maldini 2019). In their own calculations Coscieme et al. determined that in a four-season region, like here in Finland, **85 items** – excluding undergarments and accessories, but including shoes- would be appropriate for **a sufficient wardrobe**. This sufficiency wardrobe would include items needed for our individual lifestyle, including for work, home, sports, and outdoors activities as well as festive occasions.

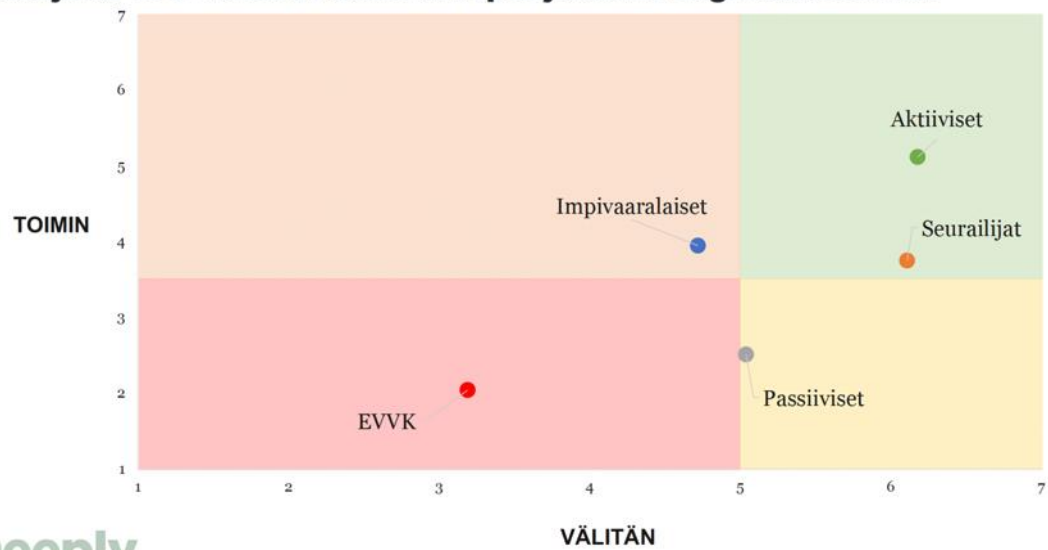
Thus, I would conclude that **sustainability and sufficiency are quite interdependent**. In my opinion, **use of any version of sufficiency that leads to concrete action is likely a beneficial step for the ecosystem, fashion system and human behavior system**. And calculations for **a wardrobe where most items are in active use** versus what our own wardrobes look like, certainly give food for thought. After all, not only has each and every item taken some finite resources during its creation, but it also requires energy to maintain and somehow to be dealt with at the end of its useful life.

Just like a multitude of other similar studies, two recent textile and clothing consumer studies in Finland concluded that **fashion consumers have an attitude behavior gap**. 'Green Gap' study was done by Deeply Research and commissioned by Finlayson in December 2020. 'Suomalainen kuluttaja 2020' / 'Finnish consumer 2020' study was done in September 2019 by Norstat for Suomen Tekstiili ja Muoti ry / Finnish Textile and Fashion Association and included 'Vastuullinen kuluttaja 2020' / 'Responsible consumer 2020' section.

'Green Gap' research found that it was difficult for consumers to locate responsible items. Part of the reason was their own lack of research, but they also felt that at the end it is impossible to know if items are truly responsibly produced. The perception was that sustainable items are more expensive, but the participants also admitted being driven by their personal desires rather than sustainability. Many participants thought that the responsibility for more sustainable selection should be on politicians and companies, not on consumers. On the other hand, over half of the participants suspected that corporate sustainability messaging included some greenwashing.

One of the core findings of 'Green Gap' was that women were more sustainability minded than men and that younger (under 25) and older (65-79) people cared a bit more about sustainability than the in-between age groups. According to the study, geographic location in Finland made minimal difference in people's sustainability thinking as did income and education level. The main differentiating factor in people's sustainability thinking and following up with their actions was their **value base**.

Suhtautuminen vastuullisuuteen ei selity sosiodemografisilla muuttujilla. Erot tulevat esiin arvopohjaisella segmentoinnilla.



Deeply

According to 'Green Gap' the attitude towards sustainability is not explained by socio demographic variables. The differences show themselves in value-based segmentation. Image credit: Green Gap.

The findings in 'Responsible Consumer 2020' were overall in line with 'Green Gap' research. The attitude-behavior gap could be found in this study when comparing sustainability minded shoppers to average shoppers. For example, the women who valued sustainability, including climate and environmental issues, shopped as frequently for clothes as women on average. The sustainability minded men shopped more than men on average. Interestingly, the brands favored by the sustainability minded women were 9 out of 10 times and by men 8 out of 10 times the same as for average shoppers. All the brands in these top 10 lists happen to do majority of their production in Global South.

But why bother paying special attention to our fashion consumption habits if it is not as big of an issue as our housing, transportation, or food choices?

Well, maybe **the short answer is that it all adds up**. And if we view fashion as a 'frivolous and not so serious part of our lives', then perhaps it is the perfect training ground for holistic lifestyle change.

Essentially, overshoot is a crisis of human behavior. For decades we've been telling people to change their behavior without saying: 'Change your behavior.'

We've been saying 'be more green' or 'fly less', but meanwhile all of the things that drive behavior have been pushing the other way. All of these subtle cues and not so subtle cues have literally been pushing the opposite direction – and we've been wondering why nothing's changing. *Joseph Merz, Scientist, Entrepreneur, 2024.*

2.3 Barriers to Fashion Consumer's Pro-Environmental Action.

Roope Mokka, a Finnish futurist, poignantly wrote that there is **a hole in our imagination**: We can easily imagine a complete collapse based on what is going on in the world.

The end could come from:

- Eco catastrophe. Famine. Third world war. Digital totalitarianism.
- Perhaps even from the rise of populism.

Yet, we go back to doing things the same way as the day before.

We, for some reason, forget that the societal structures that we function in, and build our future on, were **created by humans**. That includes our markets,

organizational structures, supply chains, family structures, value sets and so forth. But they all could be different. That is, **if we were capable of imagining things differently** (Mokka, 2022).

2.3.1 Internal battle.

In a recent consumer study, 75% of French consumers claim to regularly buy organic food products, even though organic food only represents 5% of the French food market (White et al. July-August 2019). And in a recent survey in Finland done by Finnish Textile and Fashion Association, the consumers interested in sustainable clothing and textiles, shopped at least as frequently, and favored the same brands as the ones who weren't sustainability conscious.

Key explanation to these occurrences is:

- **intention-behavior gap** (Sheeran & Webb 2016),

also closely related to attitude-behavior gap, knowledge-to-action gap, value-action gap, and intention-action gap. They all **occur when our behavior doesn't align with the initial intention**.

Green gap is more specifically the gap between consumers' positive attitudes toward environment / sustainability and their actual consumption behavior. This pesky gap challenges public policy makers, and non-government organizations (NGOs) who promote sustainability. It is also frustrating to brands that want to invest in sustainability. Since transparent supply chains and circular systems require investment, that more responsible product also needs a reformed consumer willing to pay for it (Johnstone & Tan 2015; Prothero et al. 2011).

Already in 2011, a study titled "Mainstream Green: Moving sustainability from niche to normal" examined ways of closing the Green Gap in the US. This study found that 82% of Americans have the intention of being green, but only 16% act according to it. Half of the participants felt that the environmentally friendly product category was for either "Crunchy Granola Hippies" or "Rich Elitist Snobs" rather than for "Everyday Americans". Some suggested solutions

included making the eco-friendly products to stand out less and be more male ego-friendly in order to reduce stigma. Study also acknowledged the inherent traits of human nature, which puts self-interest above altruism. Conclusion is to put focus on changing behavior, not attitudes (Björk 2011).

Several years later, Katherine White, Rishad Habib and David J. Hardisty from the University of British Columbia's Sauder School of Business examined the most effective ways to shift consumer behaviors towards sustainability. In their review of the academic literature from marketing and behavioral science, they came to conclusion that consumers are more likely to engage in pro-environmental behavior when the message leveraged on **SHIFT**:

- **S** for Social influence.
- **H** for Habit formation.
- **I** for Individual self
- **F** for Feelings or cognition.
- **T** for Tangibility.

Because we tend to conform to what people around us are doing and fit into surrounding social norms, **social influence** can be a powerful tool for pro-environmental behavior change. Leveraging on the support from community norms works well if most people around us are doing things in a sustainable and responsible way. Obviously, the technique may backfire, if we are surrounded by people with little regard to our environment (White et al. 2019).

Since we humans are also creatures of habit - firmly set in our ways, breaking bad habits can be difficult. Different techniques like feedback and incentives can help us in new **habit formation** - think of the Pikku Juttu/Little Thing challenge for energy savings. Knowing where we are compared to our neighbors or getting some sort of reward for good behavior can encourage us, but especially if the rewarding 'gold stars' stop coming, we may not feel deep enough desire to change our ways more permanently (White et al. July-August 2019).

One great example of a sustainable habit formation is ordinary citizens' participation in bottle and can collecting systems. Select European countries use a deposit return scheme, where the consumer pays a deposit on PET bottle

or aluminum can when purchasing it, then getting a refund when returning the empty one. The return rates of above 90% like in Germany and all Nordic countries (EU Deposit Return Scheme).



Reuse, reduce, recycle. Image credit: self.

The deposit creates **an economic incentive**, but it also signals that the empty bottle has **value as a resource**. Additionally, having reverse vending machines that take the bottles and cans back, **conveniently located** in most every grocery store is essential. Also, the **long tradition of organized effort** for bottle collecting, dating back to 1902 in Norway, and the deposit systems in Finland since the arrival of Coca-Cola in 1952 Helsinki Olympics, have created **a strong social norm** (Norway Deposit Return Scheme, Finland Deposit Return Scheme).

This, like any other system, is not perfect and only tackles a very specific recycling stream. However, **it proves that organized system change can be very efficient**. And when well structured, it gets us **ordinary citizens to be active participants**. Other incentivizing schemes, such as getting a discount code for next purchase when bringing in old clothes to be recycled, may not be nearly as well thought out. Not only does such a scheme encourage more consumption, but often the recycling channels have not been well realized in advance.

Unsurprisingly, the most powerful influence is linked to our **Individual selves**. We have a desire to maintain positive self-views and the positivity of our self-concept can be reaffirmed through consumption (Dunning, 2007). The reality that our possessions can become extensions of our identity can be beneficial for sustainable consumer behavior, if it helps us for example to take better care and appreciate what we own. **Self-efficacy**, the confidence that our actions will have a meaningful impact, can also be powerful in the right set and setting (White et al. July-August 2019).

Our actions are often based on **either emotional (feelings) or rational (cognition) processes**. Multiple studies have shown that **happy, positive messaging rather than fear mongering gets us to act more sustainably**. Especially **hope, pride and joy** have been shown to effectively influence consumer intention and optimism can motivate to maintain it over time. That said, **using mild to moderate fear, collective guilt, or sadness in sustainability messaging can be an effective jolt to get our attention** (White et al. 2019).

Getting practical information about environmental impacts of our behavior can feel overwhelming and too complex. One effective way of persuading consumers towards more sustainable action is by presenting information regarding desired or undesired behaviors and their consequences. However, figuring out what is just the right amount of information and clear delivery is the key to **avoiding information overload and confusion from conflicting information** (White et al. 2019).

EU Green Deal project **PS lifestyle**, which calculates personal carbon footprint from housing, transportation, food and shopping choices in eight EU countries, is a tool that helps us ordinary citizens better grasp individuals' impact on the environment. Spending a bit of time with this tool can guide us to make more conscientious choices. Some questions that can help us shift our thinking and actions are:

- Do we actually need the item?
- Can we find a preowned version rather than a new one?
- Can we extend the life of what we already own by caring and repairing it?

PS lifestyle also makes painfully clear how hard reducing personal carbon footprint to 2.5 tons of CO₂e per year, the goal to be achieved by 2030, really is.

Major barrier to sustainable consumption is that the whole topic may feel abstract, vague, and distant from our everyday life. **Sustainability is future-focused whereas we consumers are often present-focused.**

Tangibility, the sense that something is real and substantial, including being close in time or distance, concrete and easy (Sitra Studies 132 – SHIFT), is the last component of the SHIFT framework. Efforts to make sustainable consumption seem more tangible can be done by, for example, communicating local or more immediate consequences and promoting dematerialization (White et al. 2019).

Even though SHIFT research has a strong focus on how businesses could market their sustainable products to attract new customers, it also explores how to help address, what White et al. call, the attitude-behavior gap.

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Big part of the internal battle in our behavior is related to our previously highly adaptive, but now self-defeating impulses to do the following:

- seek pleasure and avoid pain.
- acquire, amass and defend resources from competitors.
- display dominance, status or sex appeal through size, beauty, physicality, aggression and/or ornamentation.
- procrastinate rather than act whenever action does not have an immediate survival benefit particularly for ourselves, close relatives and our home territories. (Merz et al. 2023)

To find a way out of this mess requires us to understand our own brain structure and tendencies. It is a generally accepted reality that climate change is human generated. It also could be said that **the climate crisis is a byproduct of our ability to innovate, and problem solve for short term rewards.** However,

our nervous system is also designed to be changeable in what we find rewarding (Duhaime 2022).

Behavior changes that are needed to address climate problems are generally not rewarding for our brains. However, when experimenting with making choices more aligned with what our brains find rewarding, the results have been encouraging.



Human Brain is a complex but moldable decision-making apparatus. Image Credit: Imaging Technician and self (of Marvel Puzzle).

The brain is a decision-making apparatus that is heavily influenced by its evolutionary design but is also exquisitely flexible. We are less “hard-wired” than “predisposed”, and we spend every moment interacting with and being changed by what we experience. We *can* change what we value and prioritize, and can alter the choices we make, but this is more easily accomplished under some circumstances than others.

Ann-Christine Duhaime, neuroscientist and medical doctor, 2022.

2.3.2 External battle.

While clothing is an important tool for our self-expression, let’s not forget that **sales and marketing techniques are constantly used to mold our desires and needs**. These techniques often tap into the knowledge from psychological

discoveries and turn that into ways of selling us more stuff. Neuroscience can tell us that **our nervous system is designed so that novelty grabs more of our attention than something that is familiar.**

Historically, this has been a helpful trait, making us react differently to familiar berry patches than to a bear thus protecting ourselves from predators. However, incrementally since the 1850's; after agricultural and industrial revolutions, and especially post-World War II when things got more plentiful, **our need for newness has started working against us** (Duhaime, 2022).

As more products came to market, people had more options. This in return required more considered techniques from the seller's side. For example, the **classic sales model AIDA** was developed by American advertising pioneer Elias St. Elmo Lewis in 1898 and is still commonly used. AIDA's four stages; **Attention, Interest, Desire, and Action** guide the customer from ignorance to purchase. The model was adopted by marketing and advertising theorists who explored a variety of ways to move the consumer through the sequence all the way to action (Oxford Reference). It is techniques like AIDA that laid the ground for more sophisticated schemes where our desires were intended to overshadow our needs.



Classic sales model AIDA. Image credit: An AI Story.

Ironically, Sigmund Freud, the father of psychoanalysis and a critic of all things American, ended up having a profound influence on Western consumer culture. This happened through his nephew, Edward Bernays, the father of modern public relations. Bernays was fascinated by Freud's exploration of the subconscious mind and notion that irrational forces drive human behavior (Held, 2009).

Bernays used his uncle's psychoanalysis work as a foundation to develop techniques for widespread **behavioral manipulation**, which he later called **The Engineering of Consent**, describing it as the 'use of an engineering approach – this is, action based only on thorough knowledge of the situation and on the application of scientific principles and tried practices to the task of getting people to support ideas and programs' (Merz et al. 2023).

Freud sought to uncover motivations, but Bernays' interest was more about how to mask them in the name of public service.

The conscious and intelligent manipulation of the organized habits and opinions of the masses is an important element in democratic society. *Edward Bernays, Father of PR, 1928.*

In "Propaganda", published in 1928, Bernays hypothesized that by understanding the group mind, it would be possible to manipulate people's behavior without them even realizing it. To test this hypothesis and to broaden the market for his client, the American Tobacco Company, he launched Lucky Strike's "Torches of Freedom" campaign (Held 2009).

Many of the social norms were going against this campaign; smoking was a symbol of male power; respectable women did not smoke in public and even the packaging of Lucky Strike was considered unfashionable green. To lessen the social stigma, Bernays first asked some fashion designers to add Lucky Strike green into their collections, then used New York's annual Easter Parade

as his promotional venue, complete with well-heeled young debutantes from Vogue editor's list as models – all smoking, some wearing green, freedom of women as message and local, national, and international newspapers as a vehicle to spread the message.



“Women Are Free!” American Tobacco Co. ad and Torches of Freedom March, both in 1929. Image credit: American Tobacco Co. and Library of Congress.

Even if the campaign did not bring gender equality, it created an image of attractive and successful women smoking, increased the sales of cigarettes, and made the color green more fashionable. Lucky Strikes went on to advertise cigarettes as a way to lose weight and Bernays continued his ground-breaking work by bringing Hollywood stars into ad campaigns, doing product placement in movies, getting consumers distracted during distressing wartime with fashion (Bedat 2021). This novel approach of marketing an image and a dream instead of functional differentiation, proved highly influential on the way products were and still are marketed and sold to consumers. And fashion became a powerful tool to boost our mood, reinforce our identity or elevate our social status (Merz et al. 2023).

The current iteration of marketing includes data collecting created by puppeteers of a different magnitude. While we acknowledge that we are being

played, most of us don't necessarily feel the correlation to our day-to-day decision making. But the reality is that the marketers who have been collecting data on us for years are more aware of our behavior than we might be.

Tim Wu, a Columbia law school professor, calls the big data collectors like Google, Facebook, Twitter/X and so forth by a fitting name: **attention merchants**. These companies have captured our attention, monitoring where it goes; and then building products and services that cater to where our attention drifts (Wu 2016). While the direction, especially through increased regulation, is towards us individuals owning our own data in Web3, both positive and negative effects of attention merchants are much longer lasting than we can even imagine.

2.4 Enablers for Wardrobes Filled with Style & Respect for Others.

Most of the time **we dress to fit in or stand out, guided by societal expectations and our personal intuitions**. Naturally, our clothing also serves as a practical and necessary protective shield in different weather conditions. But when assessing the holistic scenario, it is crucial to keep in mind the following:

Defining environmentally sustainable products, within and outside of fashion, is complex. In a strict sense, there is no such thing as a truly sustainable or green product, as at some stage in their life cycles all products we buy, own, use and discard in our everyday lives will have negative environmental impacts. Typically, products with low environmental impact are regarded as environmentally sustainable products. *Picket-Baker et al., 2008.*

2.4.1 Rewards from our brain functions and cognitive biases.

A variety of research using both qualitative and quantitative methods suggests that pro-environmental consumption may help increase the market share of 'green' products and force companies to improve sustainability. However, according to Liu et al. these methods rely on respondents' subjective perceptions and the appraisal of others. Thus, they mainly reveal **consumer's purchasing intentions and "willingness to pay"** (WTP) and other factors influencing the decision making. More recently, an increased amount of behavioral science research has been done on pro-environmental consumer behavior using emerging neuroscience techniques (Liu et al. 2023).

Liu et al. found that our brains have strong neural activity in response to different marketing stimuli and different parts of our brain activate from positive feedback than from negative. Additionally, studies, which were done in various parts of the world, concluded that most of the consumers' neural activity involved two regions in the brain regardless of where the studies were done. These regions are the **prefrontal cortex**, which is **associated with emotion of closeness**, and the **orbitofrontal cortex**, **associated with emotional rejection**. Liu et. al concluded that **consumers' decisions are related to unconscious processes such as emotion, attention, and memory**.

Even if measuring **consumers' emotional reactions** require one kind of technology (MRI and functionalMRI) than measuring **consumer attention** (EEG), neuroscience has huge potential to reshape future consumption (Liu et al. 2023). Perhaps, it is safe to conclude, even without deep knowledge in neuroscience, that our consumer behavior responses can not only be measured in the amount of our shopping bags but in our brain reactions.

While this thesis only scratches the surface of our brain functions, I do want to mention a few brain chemicals that are strongly related to our behavior regulation and behavior change:

- **Dopamine:** the feel-good promotor of desire, reward hormone that can be used for positive behavior design using personalized and meaningful messaging. It can also be ‘marketers’ best friend’ as it is linked to impulsive behavior.
- **Oxytocin:** the love hormone that can form strong and lasting bonds not only to other humans, but animals, nature as well as brands.
- **Serotonin:** the wellbeing hormone and motivation through positive emotions. While it helps with our overall mood balance through good sleep, eating and digestion, it also reduces depression and anxiety, including climate anxiety. (Harvard Health Publishing)

While other brain chemicals contribute to our overall health and wellbeing the above three are more directly in line with positive behavior change.

Additionally, it is vital to understand **self-control** or **willpower**, **the ability to resist short-term gratification in pursuit of long-term goals and objectives**, a key component in lasting behavior change. Much of scientific research shows that:

- **willpower functions like a muscle**, rather than a personality trait.

This also means that just like successfully building muscle, similar rules apply to building willpower. It **requires work-out to the level of fatigue and then rest so it can recover**. And just like our muscles, over time willpower becomes stronger, but also can be exhausted too much (American Psychological Association 2012). The earlier in life you start practicing, the less painful it probably is.

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In the early 1970s, cognitive psychologists Amos Tversky and Daniel Kahneman introduced the term ‘**cognitive bias**’. It describes our systematic, and flawed patterns of responses to judgment- or decision-based problems (Wilke & Mata 2012). These, often unconscious, biases, are dependent on our personal and societal experiences. They may also be the thing that unites us humans regardless of which culture we are in or from. We all have cognitive biases.

Various research has been done about the plentiful versions of cognitive biases and even Wikipedia lists **more than 180 known cognitive biases** - illustrated in Appendix I. Below is 'TOP 10' of what most commonly affect our decision making according to Engaged: Designing for Behavior Change, but many more have a potential to distort our feelings, thoughts and actions when it comes to justifying our style and lifestyle.

COGNITIVE BIAS 'TOP 10'	DESCRIPTION
# 1 ANCHORING	* THE FIRST OPINION WE SEE, ANCHORS OUR OPINION.
# 2 AVAILABILITY BIAS	* WE BELIEVE THAT THINGS WE CAN REMEMBER MORE EASILY ARE MORE COMMON THAN THEY REALLY ARE.
# 3 CONFIRMATION BIAS	* WE SEEK INFORMATION THAT CONFIRMS WHAT WE ALREADY BELIEVE.
# 4 LOSS AVERSION	* WE ARE MORE SENSITIVE TO LOOSING WHAT WE ALREADY HAVE THAN GAINING WHAT WE DON'T HAVE YET.
# 5 PRESENT BIAS	* WE ARE MORE ATTUNED TO WHAT'S HAPPENING NOW THAN IN THE PAST OR WILL IN THE FUTURE.
# 6 STATUS QUO BIAS	* WE WILL STICK WITH WHAT WE KNOW OVER AN UNFAMILIAR OPTION.
# 7 MERE EXPOSURE EFFECT	* ONCE WE SEE INFORMATION, WE ARE MORE LIKELY TO BELIEVE IT IS TRUE WHEN WE SEEN IT AGAIN.
# 8 SUNK COST FALLACY	* WE HAVE HARD TIME WALKING AWAY FROM UNSUCCESSFUL THING IF WE SPENT TIME, ENERGY AND \$\$ ON IT.
# 9 OUTCOME BIAS	* WE JUDGE A PROCESS AS BEING GOOD IF THE OUTCOME WAS FAVORABLE.
# 10 RECENCY EFFECT	* WE ARE MORE LIKELY TO REMEMBER RECENT EVENTS & VIEW THEM AS DISPROPORTIONATELY MORE IMPORTANT.

Cognitive Biases 'TOP 10' Chart. Modeled using info from Engaged: Designing for Behavior Change.

Fortunately, there is another way of looking at the situation:

Cognitive biases are just **tools**, useful in the right contexts, harmful in others. They're the only tools we've got, and they're even pretty good at what they're meant to do. We might as well get familiar with them and even appreciate that we at least have some ability to process the universe with our mysterious brains.

Buster Benson, in Engaged: Designing for Behavior Change. 2020.

2.4.2 Fashionable behavior design.

According to Bergquist et al. behavioral change is an essential part of climate change mitigation. A recent comprehensive study looked at the effectiveness of **six different mitigation intervention types**:

- Appeals.
- Commitment.
- Education.
- Feedback.
- Financial incentives.
- Social comparisons.

This second-order meta-analysis found that interventions aimed to promote voluntary climate change mitigation behaviors in field-settings resulted overall in behavior change. According to the study, **the most effective interventions were based on financial incentives and social comparisons and the least effective ones were based on education and feedback alone** (Bergquist et al. 2023).

Creating a happier, healthier life can be both easy and fun.

BJ Fogg, PhD., Educator and Entrepreneur.

In 2007, behavior scientist and Stanford University professor BJ Fogg came up with the “Fogg Behavior Model” with a formula $B=MAP$ (B for behavior, M for motivation, A for Ability and P for Prompt), a not so distant relative of COM-B. The B=MAP model and use of it as a design method was so profound that the name of Stanford’s “Persuasive Tech Lab” was changed to “Behavior Design Lab” (bjfogg.com). Stanford’s Behavior Design Lab defines **behavior design as a new approach to understanding human behavior and how to design for behavior change** (Stanford Behavior Design Lab). Again, a reminder that these techniques can be and have been used for both deviously self-serving and honest community serving purposes.

In **Engaged; Designing for Behavior Change**, author Amy Bucher emphasizes that if users are not achieving the behavior change results, or they are not doing the expected behaviors, it should be seen as an opportunity for

behavior designers to dig deeper. Simply put, meeting the needs of product or service users, especially when it has a behavior design component, is **an ever-evolving process with multitude of iterations** - just like any considered design process.

Already just by the way our brain operates, **our decisions, including purchasing decisions, operate partially at a subconscious level.** Then add **planned obsolescence**, a situation in which goods are deliberately made or designed so that they do not last for a long period of time (Cambridge Dictionary), and it **can lead to sheer chaos in our minds.**

More specifically, **willpower gets exhausted from too many choices too often.** This in turn can lead to:

- **decision fatigue**, which means that **our ability to make decisions or control our behavior is impaired as a consequence of repeatedly making decisions.** (Pignatiello 2018)

And no wonder, as **an average American adult is estimated to make 35,000 decisions per day** (Sollisch J 2016). I assume that this number is not significantly different in general in the Global North, nor that most of these decisions are crucial for our survival or good for our wellbeing.



Early childhood educators teach many valuable life-skills, but the challenge is to continue nurturing these skills later in life. Image credit: self.

Additionally, no matter what we would like to believe, **our brains are not perfectly logical in their mode of operating or fancifully in Latin; modus operandi (M.O.).**

3 Introducing State of Sisu

The name and ideation for **State of Sisu** had been brewing for years while I was an educator in San Francisco, guiding graduate students to create fashion collections out of their concepts. I was pushing them to develop design and making skills, work ethics and a love for the process with the motivational carrot of New York Fashion Week slot at the end of their master's studies.

Simultaneously, I was struggling with the fact that over the years what I had learned, loved, and loathed about the fashion industry as a designer, atelier director and educator didn't make sense anymore. The world didn't need another piece of new clothing, nor another collection that likely would be forgotten when the next season rolled around.

Still, I loved the craft, the creativity, and the fact that it always took a team of talent to create something greater than any individual could have done on their own. I also loved that the teams were culturally diverse and able to unite their efforts towards a common goal, be it as frivolous as fashion.

In other words, I still love the process and the community, but not the creation of new products, or teaching how to create new products.

3.1 State of Sisu from Concept to Company.

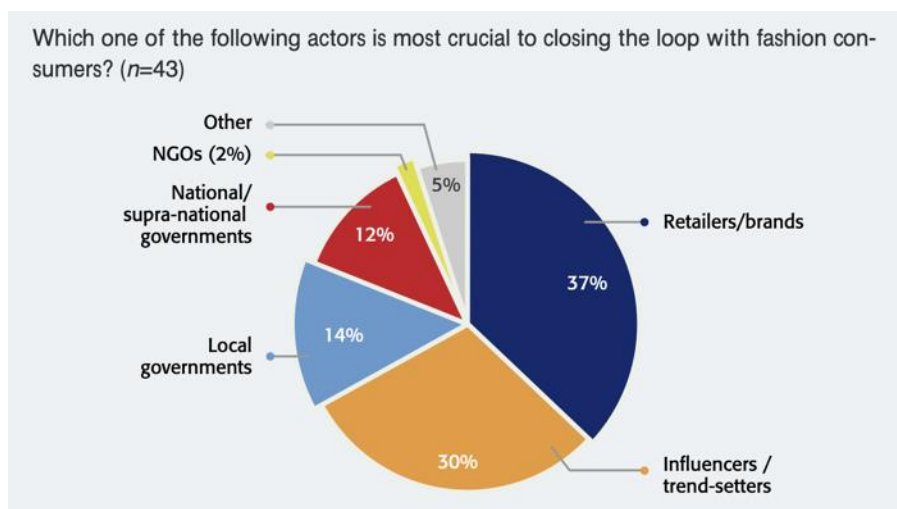
One of the most difficult challenges going forward will be to change consumer behavior and the meaning of fashion. Consumers must understand fashion as more of a functional product rather than

entertainment and be ready to pay higher prices that account for the environmental impact of fashion.

Niinimäki et al. 2020.

While I agree with the above statement, I find it hard to believe that we would be willing to give up the entertaining part of fashion. Thus a balance between **promoting the joy of fashion, self-expression and respect for the planetary boundaries** may need to be found through fashion consumer behavior design and social media (de)influencing.

According to the UN, the most crucial actors to help close the loop with fashion consumers are retailers/brands (37%) and influencers/trend-setters (30%). While there is never guarantees of a business venture working out, especially long term, if and when State of Sisu will be both a brand and an influencer/trend-setter, that gives some hope.



Most crucial sectors for influencing fashion consumer behavior according to the United Nation. Image credit: UN.org / Fashion and Lifestyle Network.

Additional inspiration for my thinking came from the **“Rule of 5” challenge** and variations like **“Viiden vaatteen vuosi”** here in Finland with slightly different guidelines. What made this challenge different from other ‘life hacks’ and ‘fashion diets’ is that it is based on academic research from **Hot or Cool Institute’s “Unfit, Unfair and Unfashionable” report** which found that:

If no other actions are implemented, such as repairing/mending, washing at lower temperatures, or buying second-hand, purchases of new garments should be limited to an average 5 items per year for achieving consumption levels in line with the 1.5-degree target. *Coscieme et al., 2022.*

The report was published towards the end of 2022 and the challenges loosely based on it started in January 2023. Because the thought of anyone being able to survive a year without frequent fashion purchases was so extreme, there was a lot of media coverage - at least in my algorithm bubble. By January 2024, there were many Rule of Five stories shared and a new year of challenges started. However, my interest in the coverage was not if a person had purchased 5 (success) or 15 items (failure), what those items were, or even if purchasing of 2nd hand items were counted in this tally (#ruleof5) or just new items (#viidenvaatteenvuosi), but descriptions of how the participants felt.

In most cases **the process made them:**

- **pay more attention to their consumer behavior,**
- **be more creative with their existing wardrobe**
- **create healthier relationship with fashion**
- **save money**

So, when looking at the sustainability action in use phase we need to find these kinds of strong motivators to push us into action. Our wardrobe could be inspired by the traditional bridal concept of **wearing something new, something old and something borrowed; in this case emphasis on the last two.**

But the million dollar or at least a few euro question remains: how to create a revenue stream from inspiring and guiding consumer decision making during the use phase, while informing about the upstream and downstream phases for a holistic view of the fashion system. And still promote the joy of fashion.

One obvious component for State of Sisu is to become a Social Enterprise company. While not as common as 'the Key Flag' and 'Design from Finland'

designations, companies in Finland can get a Social Enterprise designation. One of the main requirements is that the organization has business activities and revenue, through which it contributes to social good. Thus, the potential profits from State of Sisu could go to further research and the wellbeing of its local/global community.



The Key Flag, Design from Finland and Social Enterprise symbols. Image credit: Suomalainen Työ.

Social enterprises are engaged in responsible business activities and their primary objective is to contribute to social good. The purpose of the Finnish Social Enterprise mark is to help social enterprises to distinguish themselves from other businesses and demonstrate that the enterprise applies the Finnish Social Enterprise business model.

The Association for Finnish Work.

State of Sisu was founded in name and became a partner-member to the Finnish Textile and Fashion Association in Spring/Summer 2023. Proper business development will be the focus in the Fall 2024 – post submission of this thesis. State of Sisu Business Model Canvas can be seen in Appendix II.

The DNA of State of Sisu:

1. to promote behavior/habit change, not products.
2. to create entertaining social media content and educational materials.
3. to do selective consulting, styling and speaking engagements, perhaps write a book.
4. to not design or produce new clothes, upcycled products are OK.
5. to create enough revenue to pay for collaborators and equipment, and for anyone involved in the State of Sisu to afford a fair and mindful lifestyle.

And to those not fluent in Finnish, Sisu is a word that cannot be exactly translated to any other language. However, it is frequently used to describe the Finnish inner strength, extraordinary determination and courage, especially in the face of extreme adversity. Many researchers, including E. Elisabeth Lahti, Ph.D of SisuLab, have been spreading the gospel of this concept of resilience and grit to achieve social good (Lahti 2019). While the fashion industry mayhem may not be exactly comparable to the battlegrounds where the Finnish sisu was incubated, it still seems rather fitting.

4 Methodology

Chapter 4 will introduce the methods used during this research along with the reasoning behind the chosen method:

- In 4.1 Qualitative Research methods are discussed in general terms. Additionally, more specific versions of qualitative research, applicable to this thesis are covered.
- In 4.2 Data Collecting section will talk about the ways the data was collected and the flow of the process.
- 4.3 has a short recap of a few challenges faced during the process.
- In the 4.4 Data Analyzes section, the methods used to analyze the collected data are explained.
- In 4.5 Reliability of the Research is being discussed.

4.1 Qualitative Research.

Because I have lived in 'a fashion bubble', it was important to talk to ordinary consumers who have limited association with the fashion industry. Then circle back to a few people with closer connections to the fashion system but different viewpoints, for additional perspective. I also chose to briefly analyze my own wardrobe, not because I have figured things out, but because I know my own rational and irrational justifications for acquiring and holding onto items in my wardrobe. Our family has also had big life-changes in recent years which have affected my clothing needs and access to what I already own.

To get an in-depth understanding of people's clothing and textile consumption habits, I chose **a qualitative research method and approached it with lived experience emphasis**. This approach allowed me to understand ordinary consumer's wardrobe preferences, as well as their knowledge level about sustainability. It helped to inform about the connection between consumer views, values, experiences, and willingness to change. Using the lived experience approach opened up an opportunity to write in a less formal manner, which hopefully makes this research more approachable to a wider audience.

Qualitative research begins with assumptions and the use of interpretive/theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns or themes.

The final written report or presentation includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change.

John W. Creswell, Qualitative Inquiry & Research Design: Choosing Among Five Approaches, 2013.

My life experiences have given me a deep respect for the whole ecosystem and a strong will to not steal from my daughter's future nor from the Global South. My professional roles as a designer and educator give me some tools to do my part in leading by example and contribute to positive change. Last but not least, my personal neurological challenges have taught me about the fragility and neuroplasticity of our brains. It has given me a strong trust that some of the answers to the required behavior change come from better understanding our brains' functional design.

While my thesis is written using more generic **lived experience** guidelines, many parts of the phenomenology apply to my approach:

Phenomenology appeals to our immediate common experience in order to conduct a structural analysis of what is most common, most familiar, most self-evident to us. The aim is to construct an animating, evocative description (text) of human actions, behaviors, intentions, and experiences as we meet them in the lifeworld (page 19).

Lived experience is a starting point and end point of phenomenological research. The aim of phenomenology is to transition lived experience into a textual expression of its essence – in such a way that the effect of the text is at once a reflective re-living and a reflective appropriation of something meaningful: a notion by which a reader is powerfully animated in his or her own lived experience (page 36).

In actual phenomenological descriptions one often notices that the author uses the “I” form or the “we” form. This is done not only to enhance the evocative value of a truth experience expressed in this way, but also to show that the author recognizes both that one’s own experiences are possible experiences of others and also that the experiences of others are the possible experiences of oneself (pages 57-58).

Max Van Manen. Researching Lived Experience -Human Science for Action Sensitive Pedagogy. 1990.

A core goal of this research is to provide State of Sisu with guidance on how to connect the human behavior system and fashion system thinking to benefit the ecosystem. I also explore how behavior change at an individual level can help support fashion system change.

If your aim is to unleash collective action (which is something we really should do, right?), "we" can serve as an open invitation. "we"

is anyone with whom this invitation resonates, it can encourage solidarity in the era of distinction.

Roope Mokka, Futurist. LinkedIn post. 2024.

4.1.1 Would we change our behavior if we felt, thought, and acted like the ecosystem was our boss?

The bottom line: there is no such thing as truly sustainable fashion!

Every item produced, and 'in better case scenarios' also worn by someone, has required some combination of raw materials, energy, water and most likely chemicals. **When we consider the cost to our ecosystem, the cost of sales;** the accumulated total of all costs used to create a product or service, which has been sold, **goes way beyond the traditional accounting thinking.**

The sad reality is that so much of what we see in the sustainability sector is really just a mirage designed to make shopping seem less problematic than it actually is.

If shopping is the problem, then sustainability isn't the answer. Our shopping habits are what's driving fashion's terrible impact on the environment, and that's why it's important to question them.

Alec Leach, writer in the sustainable fashion space, 2021.

While ordinary citizens cannot be expected to perform due diligence on tangled supply chains, asking clear and direct questions from your favorite brands about their sustainability and production practices is not a bad idea. At least in theory these questions could range from material selection, chemical use, manufacturing conditions, product design, quality, repairability and resale value. A simple question like: are all the people in your supply chain paid living wages (not just minimum wages) can cover a lot of ground in the human rights part of the equation. But in reality, **controlling our own buying habits is the biggest leverage we have.**

It is well documented that across the board, from ultra-fast fashion to most exclusive luxury brands there are supply chain issues regardless of how rosy

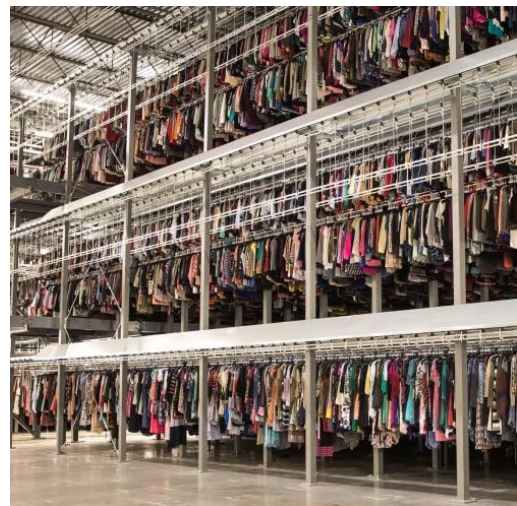
the sustainability messaging is. Or as Alec Leach, the author of “The world is on fire, but we’re still buying shoes”, puts it:

Big Fashion says it wants to be more sustainable, but it doesn’t seem like it wants it enough to actually pay for it!

Many of us occasionally **wear conflicting hats in our different roles**. For example, **what we are asked to do ‘for the good of the company’ does not always align with what in our mind is good for the environment or the future of our own children**. From personal experience, I can vouch that it is stressful to work for an entity that does not share my values. However, we still mostly make choices that are **first and foremost practical for our immediate situation**, like keeping a roof over our head, food on the table and bills paid.

Throughout this thesis I examine our options and their cause and effect with the goal of seeing if:

- the choices that are good for our own immediate personal needs and wants can also be good for the world around us, if done in moderation.



It can be difficult to control our own impulses to buy - be it new or 2nd hand items. Image Credits: British Fashion Council & ThreadUp website.

4.1.2 How to shift (fashion consumer) behavior to style-centric sufficiency thinking?

While there were many ways to approach the research on how we all could shift to style-focused sufficiency thinking, one of my guiding stars was the research done by Bergquist et al. It showed that **the most effective interventions were based on financial incentives and social comparisons and the least effective ones were based on education and feedback alone**. While I knew, as an educator, that I should not only focus on the most effective techniques and ignore the least effective, it was also very valid and eye-opening information (Bergquist et al. 2023).

Description of intervention techniques that Bergquist et al. studied were:

- **Appeals:** Appeals demand and urge people to act more sustainably by targeting their values or responsibilities. Appeals could, for example, remind people to save electricity.
- **Commitment:** Commitment interventions are trying to motivate people to commit to sustainable behaviors. Examples are goal setting, public commitments, or implementation intentions.
- **Education:** Education interventions aim to increase knowledge about sustainable behaviors by educating people with factual information. Examples are informational flyers or videos, statistics, practical tips, or energy labels.
- **Feedback:** Feedback provides individuals or households with information about their own past behaviors. Interventions could, for example, provide feedback about the water or electricity consumption, or recycling behavior of a specific household.
- **Financial incentives:** Financial incentives are financial rewards to people for acting in a sustainable way. Financial incentives include, for example, financial rewards, reimbursements, or unit pricing programs.
- **Social comparison:** Social comparisons highlight other people's pro-environmental behaviors or attitudes as a means to increase pro-environmental behaviors. These include modeling and social norms.

Each technique, either separately or in combination, is likely to have some value for State of Sisu's future development. Later testing them to see what resonates and brings results will be a crucial step.

But before that, a bit more data was needed.

4.2 Data Collection.

The natural starting point for my data collecting came from the two recent consumer behavior studies commissioned by Finlayson and Finnish Textile and Clothing Association. I was especially intrigued by the conclusion in the first study indicating that our values play a bigger role in our consumption habits than any other factor. Both studies found that consumers, at some level, have a gap between their values and their actions, but neither really studied why. However, the question whether we consumers even cared about sustainability had been raised.

I was curious to find out more for the sake of my thesis and State of Sisu's future development.

My data collecting was done using:

- **Group Interviews.**
- **Expert Interviews.**
- **Observation.**

4.2.1 Group interviews.

The first part of data collecting was done by interviewing ordinary consumers in Finland. There were six **semi-structured group interviews** with a total of 20 participants. Semi-structured in this case means that the interviews were focused by asking certain questions but with scope for the respondents to also express themselves (Collins 2019).

Each participant had to fulfill the following criteria:

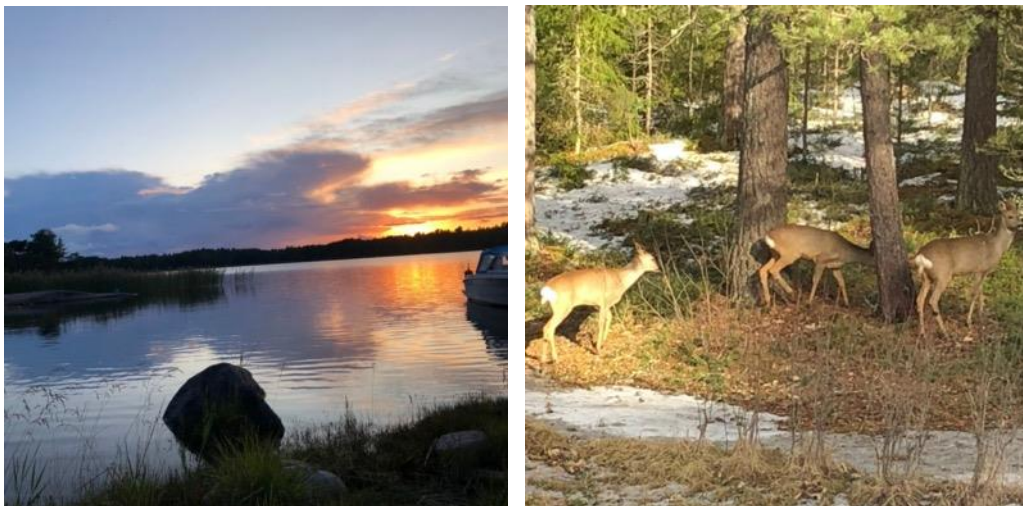
- To be over 15 years old.
- Have some experience as a textile and clothing consumer.
- Have no direct occupational connection to the fashion industry.

The participants were a mix of friends and strangers from different age groups, genders, geographic locations, education, and income levels. Consent form for the interviews and relevant details about the participants can be found in

Appendix III and IV. All interviews were conducted in informal settings during the summer of 2023. The duration of each group interview ranged anywhere from 30 to 90 minutes, depending on the number of participants and the flow of conversation. Information on interview structure and base questions can be found in Appendix VI.

I made a conscious decision not to have my laptop in these interviews, as the presence of visible technology, especially when one-sided, can change the mood. Instead, after getting consent, I recorded the conversations and had a pen and notepad for my questions and note taking. This offered a more relaxed and non-judgmental atmosphere for the participants and led to more honest and vibrant conversations.

The interviews were conducted in Finnish or English and later transcribed.



Views from two of the several scenic locations the interviews were held. Image credit: self.

Each of the six groups were asked a similar set of questions starting from what role clothing and textiles played in their lives, about their consumption habits and knowledge of sustainability. The participants were also asked about their interest and ability to do deeper research on brands or products and if they saw direct links between consumer behavior and global warming or other environmental issues.

Each participant was given five behavior descriptions based on values to read, then asked to choose which option represented them the best. These five segments were taken directly from Finlayson's Green Gap research reflecting five different value sets. Since one of the conclusions from Green Gap was that people's values were more of a differentiating factor than age, sex, geographic location, education, or income level, it was important to include this into my research. In Green Gap study the five sustainability segments were given titles: Impivaaralaiset = **Isolationists**, Aktiiviset = **Actives**, Seuraajat = **Followers**, Passiiviset = **Passives**, and EVVK = **Couldn't Care Less**. To avoid any possible stigma or cognitive bias, these titles were not visible - see Appendix V for details.

Some of the participants were also shown six images from different parts of the supply chain: children picking cotton, the surroundings of a tanning facility, huge manufacturing facility, Rana Plaza after its collapse, mountain of discarded clothing in Ghana and satellite image of discarded clothing in Chile. Then, the participants were simply asked: "What kind of thoughts do these photos trigger?" After they had commented on the images, they were asked one additional question: "Would you do something differently as a textile and fashion consumer if you had more time, money, access to information or influence?" These images can be seen in Appendix VII.

4.2.2 Expert interviews.

While **one-on-one expert interviews** were not a focal point in my data collecting, the two interviews gave some professional perspective when thinking of sustainability and consumer behavior.

My chat with (at that time) Manna & Co's CEO Sampsa Laine, led me to another chat with (at the time) Manna & Co's sustainability director Susanna Inkinen. She kindly arranged for an interview with Jukka Kurttila, the creative director of Finlayson, one of the textile and clothing brands under the umbrella of Manna. Additionally, to widen my thinking on how secondhand clothing, unique personal style and technology can help further our behavior change, I spent an hour chatting with Liisa Jokinen at St. George Bakery in Helsinki.

The interviews were conducted via video conference in May 2023 (Mr. Kurttila) and in person in August 2023 (Liisa). Both interviews followed the format for in-depth, also known as unstructured, interviews, where the interviewees were allowed to talk quite freely (Collins 2019). Both conversations were in Finnish, and they were recorded for accuracy and transcribed.

4.2.3 Observation.

My experience is what I agree to attend to.

William James. American Philosopher and Psychologist.

Willam James wrote in *The Principles of Psychology*, Vol. 1 in 1890 about our attention determining the experience we end up having. While controlling our attention can help control our life and this attention management can increase our productivity (Thomas. March 15th, 2018), I took a more flaneuring approach to observation. Especially, since I had recently moved back to Finland from a thirty-year stint in the United States, I needed a better understanding of the local fashion industry, academic and sustainability landscape.

Observation involves recording the behavioral patterns of people, objects, and events in a systematic manner. In unstructured observation, the researcher monitors all aspects of the phenomenon that seem relevant. It is appropriate when the problem has yet to be formulated precisely, and flexibility is needed in observation. Observation findings should be treated as hypotheses to be tested, rather than conclusive findings.

Hilary Collins in Creative Research 2019.

Since the potential for bias in observation is high, I made some rules for myself:

- Do some homework on the speakers but enter each event with an open mind.
- Focus on listening and overall observing the atmosphere.
- At most, ask one, but well-thought-out question related to the thesis topic.
- Keep a physical journal and use technology only to document information from presentations.

I attended a multitude of lectures; panel talks and events here in Finland. Additionally, to stay informed of a wider global view, I used multiple webinars, live streams, news- and fashion publications as well as social media as my sources. They were all, in one way or another, related to the ecosystem, fashion system or human behavior system. In many cases, they addressed all three. The list of events attended can be found in Appendix VII.

Additionally, reflections from my past natural observations were done. **Natural observation** refers to observing behavior as it takes place in the environment. In my case, these observations had come from fashion design studios, factories and classrooms where I have worked over the years. I also used photography to give a nuance to the observation that written words could not capture (Collins, 2019).

4.3 Data Analysis with Behavior Design & COM-B.

Behavior design, which Stanford University's Behavior Design Lab defines as a new **approach to understanding human behavior and how to design for behavior change** is a key component when thinking of how to solve our own behavioral shortcomings (Stanford, Behavior Design Lab). According to Amy Bucher, who has Ph.D. in organizational psychology, behavior change design includes:

- **A process** for designing and building products that incorporate research and evidence.
- **Access to frameworks and theories** to help leverage proven techniques within products.
- **Tools** to define and track product success metrics.

COM-B, PRIME and BCW methods have been widely used for behavioral change research and intervention tool planning in the healthcare industry, including for public policies in the British Department of Health's tobacco control strategy and UK's National Institute of Health and Clinical Excellence's guidance on reducing obesity (Michie et al. 2011).

According to Michie, Atkins and West, who wrote 'The Behaviour Change Wheel, A Guide to Designing Intervention', **the method is applicable to behaviors across all domains, including implementation of environmental sustainability and pro-social behavior aiming to help others.** The methods can be used for any size study from individuals to groups or populations (Michie et al. 2014).

PROBLEM	INTERVENTION AIM
<p style="text-align: center;">FASHION CONSUMPTION CREATES ANXIETY AND EXCEEDS ECOLOGICAL BOUNDARIES</p>	<p style="text-align: center;">REDUCE FASHION CONSUMPTION WITHOUT SACRIFICING SELF-EXPRESSION</p>
INTERVENTION FUNCTIONS FOR CONSUMERS	
<ol style="list-style-type: none"> 1. ANALYZE YOUR EXISTING WARDROBE AND STYLE 2. TAKE GOOD CARE OF YOUR EXISTING WARDROBE 3. EXPLORE UPCYCLING AND MAKING OPTIONS 4. EXPLORE ALTERNATIVES TO BUYING NEW ITEMS 5. RESEARCH RESPONSIBLE AND LOCAL OPTIONS 	

Problem. Intervention Aim. Intervention Functions for Consumers. Behavior Design Process is based on information from Michie et al.

Though very little research using COM-B or BCW in the context of fashion can be found, I believe that this cluster of frameworks is a valid tool for fashion consumer's behavior design.

The focus on this thesis is not to develop intervention but to explore:

- Where fashion consumers' knowledge and interest baselines are.
- What support techniques should be tested in real-world settings during future development.

Data analysis is done through the COM-B lens by **assessing if greater capability, more opportunity, or stronger motivation could support**

fashion consumers' pro-environmental and sufficiency action. Also links between COM-B model, intervention functions and policy categories will be briefly explored as both individual and system level considerations are an intricate part of overall success of lasting behavior change. While the interviews gave a lot more food for thought, the data analysis is focusing on things that are relevant to behavior design. Understanding of the holistic picture, including the information not covered in this thesis, will help lay groundwork for State of Sisu's aim to develop a support-system for fashion consumers' responsible action. If done well, this may consequently help lessen attitude behavior gap and overconsumption.

4.4 Reliability of Research.

The tangled path of the thesis had parts that initially went everywhere and nowhere, but after some struggle, reflection, and re-work, became relevant again. Thus, I don't think that the messy process affected the reliability of the research. The small number of people (20) in the group interviews may not have been too serious of a weakness as it was not the only method of collecting information, but rather a foundation for additional research methods.

The use of lived experience descriptions in mixed method research could perhaps be viewed as too journalistic or personal approach. Also, the use of ordinary language including the use of "I" and "we" is less scientific. The stylistic choices still should not affect the reliability of this research.

Additionally, my lack of deep personal understanding of psychological theories or neurology has some effect on the reliability of this research. However, the use of COM-B and in smaller parts PRIME and BCW was deliberate, as their structure required less background in those fields. That said, I would not feel comfortable taking this research any further without a strong team of experts in all necessary fields.

5 Research results through COM-B lens

In this chapter I share my findings from the fieldwork, which was done using multiple data collecting techniques. Special focus here is on **interpreting the group interview findings through behavior design with COM-B lens**. I am also looking at the **cognitive biases and ability blockers** which either **guide or prevent** behavior change.

The chapter 5 is divided into four sections based on **COM-B model**:

- **C for Capability**
- **O for Opportunity**
- **M for Motivation**
- **B for Behavior Change**

C for Capability section explores **physical and psychological** capabilities of the group interview participants. I paid particular attention to the participants' **knowledgebase** and **awareness levels**. Additionally, the interviewee's **ability to pay attention** and **remember to do things** was discussed. Also, their **mental and self-regulation skills** as well as **ability to action plan** or **break undesirable habits** were being explored.

In the **O for Opportunity** section, I looked at the interview participants' **physical and social** opportunities. I was especially curious to know if **lack of time, money or access** limited them from consuming according to **their ideals and values**. I also wanted to know if they got support from family, friends and/or community toward pro-environmental consumption habits. Additionally, I wanted to know whether the community's social norm had any noticeable effects or provided good examples to follow.

M for Motivation explores both, the reflective and automatic motivational factors. Did my interview participants get a sense of pleasure from being responsible consumers? I was rather curious to know if they **cared enough** about the bigger picture **to make personal sacrifices**.

Before the interviews, I wondered if my interview participants would have interest in developing responsible consumption habits. Would they believe that our individual and collective contributions will make a difference? Would they be willing to carve time to be **educated, persuaded, incentivized** and so forth to leave behind their less desirable habits. After all, those are some core expectations from State of Sisu's niche audience.

The Finlayson's Green Gap-survey conclusion that **people's values were more of a differentiating factor than age, sex, geographic location, education, or income level** was a fascinating finding to me. So much so that I created an activity in the middle of my group interviews where the participants read through the five value descriptions taken from Green Gap and choose which one they related to the most. Not necessarily by design, this activity served also as a pause to reflect as well as a trigger for more lively conversation.

During the value activity, the participants often commented that they had value traits from a few different descriptions. They also openly discussed which value group was their ideal one, but how they sometimes acted more like another value description. There was also some criticism of how the value descriptions were worded. This is just as an FYI to the original creators of these descriptions, since I copied them exactly as worded and categorized in Green Gap. However, since I did include an English translation to every page, I will take the criticism from what potentially was lost in translation.

To my credit, I wore 'a proper researcher's hat' and had not even attempted to create preconceived notions of how my interview participants would answer. Nor had I hypothesized whether the Green Gap conclusion was going to hold water with my interviewees or not. I simply was thinking of the concept that **to change what we do; we need to first understand why we do it.**

COM-B CATEGORY	COM-B SUB-CATEGORY	EXAMPLE OF ABILITY BLOCKER
PHYSICAL CAPABILITY	DEXTERITY, STAMINA	* I DON'T HAVE STAMINA TO GO TO SPECIALTY STORES FOR MORE SUSTAINABLE PRODUCTS
PSYCHOLOGICAL CAPABILITY	KNOWLEDGE	* I HAVE TOO MANY NEW THINGS TO INTAKE * RESEARCHING SUSTAINABILITY ON SUPPLY-CHAIN IS CONFUSING AND COMPLICATED
	SELF-REGULATION	* MY DAY TO DAY LIFE IS TOO DEMANDING TO FOCUS ON THINGS LIKE SUSTAINABILITY
PHYSICAL OPPORTUNITY	EQUIPMENT	* DON'T HAVE SPACE FOR SEWING MACHINE OR OTHER MENDING TOOLS IN MY APPARTMENT
SOCIAL OPPORTUNITY	SOCIAL SUPPORT	* MY COMMUNITY DOESN'T SUPPORT ME ON MY BEHAVIOR CHANGE EFFORTS
AUTOMATIC MOTIVATION	BEHAVIORAL CONSEQUENCES	* PEOPLE IN MY COMMUNITY LOOK DOWN UPON PEOPLE WEARING OLD OR USED CLOTHES
	EMOTIONAL RESPONSES	* I DON'T FEEL GOOD ABOUT SPENDING MORE OF MY FAMILY'S HARD EARNED MONEY ON SUSTAINABLE BRANDS
REFLECTIVE MOTIVATION	GOALS	* I WANT TO TAKE PART OF # RULE OF 5 CHALLENGE - BUT NOT THIS YEAR
	PRIORITIES	* MY PRIORITIES ARE IN SPENDING TIME WITH KIDS RATHER THAN SORTING RECYCLABLES

COM-B categories, examples of potential subcategories and ability blockers. Chart modeled after information from Amy Bucher, Ph.D.

As I started the interviews, I had not grasped the holistic views through COM-B model, but rather had on the back of my mind some relevant points from Kirsi Niinimäki's **Sustainable Fashion in a Circular Economy** research:

- Because of intensive consumption and impulse purchasing our wardrobes are full, and therefore many garments in our wardrobes are not in active use.
- When constructing a new understanding of the circular economy, all levels need to take into account: consumption, design, business, industry and waste management.
- The concept of a curated wardrobe is based on the need for wiser purchase decisions whereby each garment is seen as an investment, and thus wardrobe content is constructed slowly.
- Designers must focus on creating something more meaningful and special for the end user, something that they are ready to fall in love with, keep long, cherish, and take care of (Niinimäki, 2018).

5.1 C for CAPABILITY

Because humans are **capable** of conscious, memory-based learning, we can evolve further and faster than any other species, changing not just across generations but within our own lifetimes. Though most people think that they are striving to get the things (toys, bigger houses, money, status etc.) that will make them happy, for most people those things don't supply anywhere near the long-term satisfaction that getting better at something does.

Once we get the things we are striving for, we rarely remain satisfied with them. The things are just the bait. Chasing after them forces us to evolve, and it is the evolution and not the rewards themselves that matter to us and those around us. This means that for most people **success is struggling and evolving as effectively as possible**. *Ray Dalio, Global Macro Investor.*
#principleoftheday, Instagram, 23.3.2024.

COM-B CATEGORY	COM-B SUB-CATEGORY
PHYSICAL CAPABILITY	PHYSICAL SKILLS: STRENGTH, DEXTERITY, STAMINA
PSYCHOLOGICAL CAPABILITY	KNOWLEDGE (OF CONDITION / SCIENTIFIC RATIONALE) PROCEDURAL KNOWLEDGE (OF TASK ENVIRONMENT), AWARENESS
	MEMORY; ATTENTION; ATTENTION CONTROL; DECISION MAKING; COGNITIVE OVERLOAD/TIREDNESS; MINDFULNESS; WILLPOWER.
	MENTAL SKILLS; SKILL DEVELOPMENT; COMPETENCE; ABILITY; PRACTICE; INTERPERSONAL SKILLS; SKILL ASSESMENT
	SELF-REGULATION; SELF-MONITORING; BREAKING HABITS; ACTION PLANNING.

Physical and Psychological Capability explained using COM-B categories and sub-categories. Chart based on info from Michie et al. & Amy Bucher, Ph.D.

Capability is defined as our internal capacity, both physical and psychological, to engage in activities (Michie et al. 2011). While our physical capability, including physical stamina, strength or dexterity can significantly influence what we wear, especially early and late in life, our psychological capability plays a much bigger role when thinking about our personal style or transition towards sufficiency wardrobe.

Psychological capability barriers may include:

- Not remembering to do something because it is not a habit, or something (such as travel) disrupting our routine.
- Not knowing how to do something because the system is new or too complicated.
- Getting information is too time consuming.

Below are some of the findings from my field studies related to capability:

None of the participants in the six group interviews mentioned physical capability barriers when selecting what to wear or how to acquire textile or fashion items. In general, physical barriers could come from lack of physical access to more sustainable options in the marketplace. Physical barriers could also be in reference to clothing performance. Limitations based on dexterity or stamina, especially during early and late years of our lives or because of physical disabilities, can affect our choices. These types of issues, however, were also not mentioned by any of the participants.

As **psychological capabilities** cover our **awareness** as well as **ability to pay attention** and **remember** to do things, I made an effort to guide the conversation toward these topics. Some questions also aimed to create conversation about the interviewees' **mental and self-regulation** skills as well as **ability to action-plan** and **break undesirable habits**.

Out of the twenty individuals in the six group interviews, **every single person had some knowledge of fashion related sustainability, even if their interpretation of it varied**. This included knowledge about sustainability in general as well as the science behind the mess we are in. While none of the

interviewees were professionally part of the fashion industry, they **all had a good general understanding of the industry practices, including the lack of transparency in the supply chain.**

Sustainable in the full sense: giving back what we take or (items being) recyclable. I'd say that is the key bit. Responsible means taking responsibility in sourcing. It can be sustainable because the material is sustainable, however sourced labor may not be so responsible. For us (consumers) it means having awareness or consciousness on how to buy, what to buy. *Person Q, male 25-34.*

When specifically asked about sustainable and responsible fashion, multiple lively conversations emerged.

Onko sellaista, kun vastuullinen vaate enää olemassakaan?

Ehkä jos teettäisi ompelijalla niin kuin ennen. Vaikka silloinkaan ei tiedä mistä se kangas tulee.

Suomessa valmistettuja vaatteita ei ole paljoa enää. Vastuullisuus on tekstiilin alusta lähtien inhimilliset työolosuhteet, sitä se varmaan eniten minulle tarkoittaa. Mutta en tiedä, onko sellaisia myynnissä.

-o-o-

Is there such a thing as responsible clothing anymore?

Maybe if you had it made by a seamstress like before. Although even then you don't know where the fabric comes from.

Clothing made in Finland is no longer abundant. Sustainability is human working conditions from the beginning of textile, that's probably what it means most to me. But I don't know if such items are for sale. *Person J, female 45-54.*

The three pillars of sustainability; environmental, social, and economic, were mentioned by the interviewees on many occasions. The conflict between achieving environmental and social responsibility, when the business models emphasize economic sustainability, was also brought up.

One person (Q, male, age 25-34) mentioned that after becoming aware of a fashion brand's repeated irresponsible action, he would feel uncomfortable buying from them again. For him, it would be socially as well as morally wrong. He added that while his financial situation now allows him to choose a more responsible brand, he probably also purchases from brands that 'do their share of bad things', he just isn't aware of the specifics.

Another person (J, female, age 45-54) commented on her moral dilemma after purchasing a pair of sneakers containing some recycled materials. The slogan on the product box read "no more new waste". In her opinion, the giant sneaker brand wants to sell more products while aiming to make her feel better about buying another pair of sneakers, which are partially made from X many recycled bottles. She acknowledges that not buying the pair, if she absolutely doesn't need them, would be the best option. Another person (I, female, 45-54) adds:

Allekirjoitan myös tämän, että jätä tarpeeton ostamatta. Mutta koska tämä maailma pyörii kulutuksesta ja rahan kierrosta ja ihmiset ostavat, on se eettisempää, jos on käytetty kierrätysmateriaaleja. Siinä on viety vähän eteenpäin sitä, ettei ole kertakäyttökulttuuria. Sekin on jo paljon tässä maailmassa, kun materiaaleille annetaan toinen mahdollisuus.

-o-o-

I also agree - don't buy unnecessary things. But because this world revolves around consumption and circulation of money, and people buy, it is more ethical if the products have recycled materials. It is a few steps away from a disposable culture. That is already a lot in this world when materials are given a second chance.

Many of the participants brought up supply chain issues and expressed concerns regarding the material sources, use of water, labor practices, especially child labor. Also, transportation emissions and end of life issues are brought up. One person (L, male, 55-65) mentioned that when he hears about a large corporation constantly weighing on supply chains related issues, it leads him to the assumption that something is being done about responsible

practices. General consensus was summed up by another person (K, female, 55-65) saying:

There is no point in making products out of poor-quality materials, which don't breathe and break immediately. That is just a waste of nature!

While stamina can be considered either a physical or psychological capability, when doing research about responsible companies or sustainable products, we are likely more limited by our **cognitive stamina**. **With all the demands from our everyday tasks, it is sometimes simply too overwhelming or exhausting** to start doing corporate supply chain due diligence as an individual.

Sometimes I research things so much that I get overwhelmed!
Then I go; I need this thing; I can't deal with it, and just pick something from Amazon. *Person P, female 18-24.*

Participants expressed the challenge of separating meaningful and reliable information from the green marketing, especially when it comes to certificates. While these areas will soon have more regulation, at least in the EU, there is still plenty of room for confusion. Additionally, few participants admitted that proof of sustainability, such as an ecolabel, may even encourage them to shop more.

5.1.1 Healthy skepticism.

All interviewees were somehow doubtful of the information in brand marketing or attached to the fashion items they purchased. The lack of fact-based, verified information was mentioned by most participants at some point during the conversations as a cause for the skepticism.

Vaikea on saada puolueetonta tietoa, erityisesti jos tieto tulee valmistajalta. Parasta on itse katsoa materiaalia ym. Ja jos on joskus ollut joku kestävä vaate, sitä saattaa ostaa samanlaisen

uudestaan. En usko, että lappuja tai lippuja lukemalla välttämättä tulee se tieto.

-o-o-

It is difficult to obtain unbiased information, especially if the information comes from the manufacturer. The best thing is to look for yourself - materials, etc. And if there has ever been a durable piece of clothing, you might buy the same one again. I don't believe that by reading notes or tickets, you necessarily obtain the knowledge.

Person S, male 45–54.

Tietoa voisi olla ylipäättäen enemmän. Toki ne brändit, jotka oikeasti kiinnittävät vastuullisuuteen huomiota, ja oikeasti tekee tekoja sanahelinän sijasta, kyllä osaavat myös tuoda sen esille.

-o-o-

There could be overall more information. Of course, those brands that truly pay attention to responsibility and actually take actions instead of just empty words, are able to highlight it well.

Person M, female 25–34.

Additionally, brand name, price or manufacturing origin were not necessarily seen as guarantees for good quality.

Designer clothes are often overpriced and can even use the same materials as lower-priced brands. *Person C, female 15-18.*

I don't think that made in Italy necessarily means better quality than made somewhere else. *Person A, female 45-54.*

Skepticism was also expressed regarding a single certificate as a proof for ethical behavior in the entire supply chain. Several participants were more likely to rely on past good experiences with a brand than anything else. However,

some admitted that their good experience with a product had also led to assumptions that the brand was responsible.

Store owner's extreme political views and brands getting caught using child labor were mentioned as reasons for longer term buying boycotts. Scandals in the certificate processes themselves had caused deflation of trust for the fashion industry in general.

Additionally, it was mentioned to be easier to understand or compare information from home appliances than pieces of clothing. This takes us back to **psychological capability barriers** that come from information being unclear or difficult to obtain. One of the mentioned solutions to this dilemma was to buy locally manufactured items with the following logic.

Mitä enemmän ostaa paikallista sitä lyhyemmät valheen juuret ovat. Niiden yrittäjien on oltava enemmän sanansa takana. Paikallisesti ja vastuullisesti tuotettu luonnollisesti tarkoittaa myös vähän kalliimpaa hintaa.

-o-o-

The more local you buy, the shorter the roots of lies are. Those entrepreneurs must stand more behind their word. Locally and responsibly produced naturally also means a slightly higher price.

Person 1, female 45-54.

With all the skepticism aside, **100% of the people I interviewed believed that climate change and our own consumption habits are connected.**

5.1.2 I am just one person, said billions of people.

It's better to be late and look the part!

Tom and Linda Platt, 1998.

Those were the words I was greeted with when I showed up to my internship in jeans and T-shirt after a few all-nighters doing a design project. It was not a

mean comment, but rather an educational one of what was expected from me if I was planning to work as a designer in a high-end evening wear brand in New York City. Even though times have changed, and casual dressing is a norm even in workplaces, the written or unwritten social rules and expectations are still there. However, tuning out that noise can be good for our own wellbeing as well for our environment's wellbeing.

Not only can we **feel anxiety** over what to wear, but helplessness over ecological overshoot or climate change causes additional anxiety in us. However, unlike when choosing the right things to wear, we can't use our senses to, for example, see, touch or smell carbon dioxide (CO₂), so it seems rather abstract. Thus, **climate anxiety** can come from viewing things as too huge and out of control for any individual. Then again, not so out of our control if we think about it from a cumulative perspective.

While 100% of the interview participants saw a connection between climate change and our consumption habits, not everyone felt that fashion consumption was that much of a contributor in a bigger picture. This was mentioned by individuals who themselves had limited interest in clothing and wore what they purchased for extended periods of time. Also, some participants confessed blocking any thoughts about overconsumption when they made purchases.

Several participants still felt that the change should come from government, politicians and legislation, rather than from personal accountability. Lack of time and interest were mentioned as some of the reasons, but the impact of a single individual was also viewed as miniscule. So, while cumulative action could add up to powerful change, the prominent thinking from my interviewees and billions of people around the world is: "**I am only one person**".

5.2 O for OPPORTUNITY

Opportunity is the environment where the behavior takes place. This includes both **physical opportunities** afforded by a person's location and **social opportunities** afforded by a person's cultural surroundings. Together they create **the external factors** that make behavior possible or prompt it.

COM-B CATEGORY	COM-B SUB-CATEGORY
SOCIAL OPPORTUNITY	SOCIAL PRESSURE; SOCIAL NORMS; GROUP CONFORMITY; GROUP NORMS; SOCIAL COMPARISON; SOCIAL SUPPORT; POWER; INTERGROUP CONFLICT; ALIENATION; GROUP IDENTITY; MODELING.
PHYSICAL OPPORTUNITY	ENVIRONMENTAL STRESSORS; RESOURCES/ MATERIAL RESOURCES; ORGANIZATIONAL CULTURE / CLIMATE; PROMINENT EVENTS / CRITICAL INCIDENTS; PERSON & ENVIRONMENT INTERACTION; BARRIERS & FACILITATORS.

Social and Physical Opportunity explained using COM-B categories and sub-categories. Chart based on info from Michie et al. & Amy Bucher, Ph.D.

While **time, money and access** may be the most **powerful opportunity facilitators, balance of them is also a key.** After all, often the lack of time and abundance of money and access create the largest problems for individuals and corporations. **Since this thesis is focused on common denominators, I will not discuss greed, even if it can be a major contributing factor to overconsumption and overproduction.**

In everyday life, a physical opportunity barrier can simply arise when we forget to bring something from one place to another. But when we realize that the bag containing a pair of shorts or swimsuit was left behind, it is the action part that matters. How we resolve the situation certainly depends on the social opportunity and norm, but at least as much on our own imagination.

5.2.1 Responsible fashion consumption.

While **capability - the internal ability** and **opportunity - the external ability** can overlap as enablers and barriers for our behavior, I have chosen to discuss **responsible fashion consumption** in the opportunity section.

Here are some thoughts that the group interview participants had:

Vaateostoksilla hankin aina samoja tuotteilta samoilta tekijöiltä. Se on jo testattu, että ne kestävät pesua ja on hyvät käytössä. Se on ehkä minun vastuullisuuttani.

-o-o-

In clothes shopping, I always buy the same products from the same brands. It has been already tested that they withstand washing and are good for my use. It may be my version of responsible consumption. *Person L, male 55-65.*

Several interview participants confessed their fondness for natural fibers. One person had discovered recently the superior qualities of linen in hot and humid weather, and another refused to buy a more expensive winter coat unless it was 100% wool. A vintage lover summed up her purchasing philosophy by saying:

I love certain labels, but I'd rather buy linen than polyester. Or vintage leather and fur rather than polyester. Not only do they feel better to my skin, but I also know that it will last longer, because it's better quality. And it will eventually biodegrade.

Person P, female, 18-24.

The innovative fibers were mentioned as confusing and requiring a google search while shopping to understand what they even were. However, changes in consumer preferences as well as improvement in fiber technology were noticed by several interview participants:

Nykyään, siis muutaman vuoden sisällä, arvostus kierrätys puuvillaan ja kierrätys villaan on kasvanut. Toki huonekalukankaissa niitä näkee enemmän kuin vaatteissa.

-o-o-

Nowadays, meaning within the past few years, the appreciation for recycled cotton and recycled wool has increased. Of course, you see them more in furniture fabrics than in clothes.

Person F, female 45–54.

Kyllä materiaalit ovat muuttuneet. Ennen polyesteriä ei pitänyt mielellään päällä, kun se ei hengittänyt ja vain hiosti. Nyt materiaalit ovat kehittyneet niin, että vaikka vaatteissa olisi polyesteriä, se on käytössä tosi hyvä.

-o-o-

Materials really have changed. In the past, polyester was not preferred to wear because it didn't breathe and just made you sweat. Now, materials have evolved so that even if there is polyester in the garment, it is really comfortable. *Person K, female 55-65.*

Several interview participants mentioned that one of the key factors for finding quality items from the sea of less desirable items is the ability to touch the materials, examine the quality in person and try the fit before making a purchasing decision. This has not stopped some of the interviewees buying online, especially from brands that they already know or items they have tried on before but have waited for them to go on sale. Buying online from ultra-fast fashion brands was frowned upon by the ones who saw the constant marketing and #haul videos on social media. Interviewees, who were not as active on social media had not even heard of the ultra-fast-fashion brands that came up in the conversations.

Many of the participants considered some circular economy practice to be part of their personal way of being a responsible fashion consumer. This included buying secondhand clothing, selling their used clothing or at the very least

donating their clothes to a charity or taking them to a textile recycling bin. There were several comments on how these practices have gotten easier to do, even if some shortcomings were mentioned including lack of quality secondhand clothing for men, the amount of time needed to prepare to sell and sparseness of textile recycling bins. There was also some concern for where the clothes put into the charity bins would end up.

Each and every interviewee mentioned participating in a circular economy somehow, be it yard sale, buying and selling some secondhand items like clothing, vehicles or electronics. **Everyone also recycled some of their household refuse**, some even mentioned getting great joy out of their recycling activities. Ease of having recycling bins close by and social norms from friends and family were mentioned as reasons for the action along with ecological thinking.

For most participants the concept of choosing good quality and holding onto items for a very long time, was their favorite form of responsible consumption. Many had items that they had owned for ten or twenty years and still used them on a regular basis. Some enjoyed re-discovering things from their own closet or from the back of the attic after forgetting their existence. Mending and re-tailoring old clothes was also considered an important part of sustainable fashion behavior.

Changes to everyday life, like during Covid, made some of the interviewees do all their shopping online, where others stopped shopping for fashion items as they had nowhere to go. Some said that they used the same few pairs of sweatpants and sweaters the whole time, since they were working from home or an empty office. The ones who were doing video conferencing were changing only the clothing items that were visible to the camera on regular bases. After Covid restrictions were relaxed, few participants mentioned taking part of 'the revenge shopping trend' of buying more fashion items, just because they had not shopped for so long.

The younger participants mentioned the price of more sustainable brands being a barrier for them. They also justified fast fashion purchases by saying that the styles in secondhand stores were sometimes more for adults than for teenagers. While no one mentioned stigma from shopping secondhand fashion as a barrier, some found used clothing or shoes unappealing or unhygienic.

One participant summed up the mentality of herself and her peers:

No teenager is going to think about the environment as much as they think about how their peers look at them. Most teens would rather fit in than save the world. *Person C, female, 15-18.*

The eldest participant (*person T, male, over 65*) on the other hand said that due to the lifestyle change after losing his spouse of 50 years, his need for new clothes had tapered off and he only dressed up when attending funerals.

5.3 M for MOTIVATION

Motivation is defined as **all the conscious and automatic brain processes that energize and direct behavior** (Michie et al.). It requires the integration of automatic, emotional/drive **and** decision processes.

COM-B CATEGORY	COM-B SUB-CATEGORY
REFLECTIVE MOTIVATION	BELIEFS ABOUT CAPABILITIES; SELF-CONFIDENCE; SELF-EFFICACY; PERCEIVED COMPETENCE; PERCEIVED BEHAVIORAL CONTROL; BELIEFS; SELF-ESTEEM; EMPOWERMENT; PROFESSIONAL CONFIDENCE
	BELIEFS ABOUT CONSEQUENCES; OUTCOME EXPECTANCIES; ANTICIPATED REGRET; CONSEQUENTS.
	INTENTIONS; STABILITY OF INTENTIONS; STAGES OF CHANGE MODEL; TRANSTHEORETICAL MODEL AND STAGES OF CHANGE; IMPLEMENTATION INTENTIONS.
	GOALS; GOAL PRIORITY; GOAL / TARGET SETTING; ACTION PLANNING; IMPLEMENTATION INTENTIONS
	IDENTITY; PROFESSIONAL ROLE; PERSONAL BOUNDARIES; PROFESSIONAL CONFIDENCE; GROUP IDENTITY; LEADERSHIP.
	OPTIMISM; PESSIMISM; HOPE; FAITH; UNREALISTIC OPTIMISM.
AUTOMATIC MOTIVATION	REWARDS; INCENTIVES; PUNISHMENT; CONSEQUENTS; REINFORCEMENT; CONTINGENCIES; SANCTIONS; BRIBES.
	FEAR; ANXIETY; STRESS; DEPRESSION; POSITIVE / NEGATIVE AFFECT; BURN-OUT.

Reflective and Automatic Motivation explained using COM-B categories and sub-categories. Chart based on info from Michie et al & Amy Bucher, Ph.D.

Automatic and emotional processes can lead to urges or decision processes can be rational – sometimes causing the **battle between head and heart or urge and resolve**. **Self-control** is a very important part of motivation and can help resolve win over urges. Motivation always happens in a moment and there is always a competition between different motivations. **The purpose of motivation is to prioritize one action over another** (West et al. 2020).

5.3.1 Motivation from our wants, needs, style and stuff.

At every moment we act in pursuit of what we most want or need **at that moment**. *West et al., 2020.*

That in many ways is the core principle of human behavior. The motives for our behavior are the feelings of wants and needs, which are **at the heart of all goal-directed human behavior**.

Wants can be described as **the attractions arising from anticipated pleasure or satisfaction**. **Needs** are **the attractions generated by anticipated relief from mental and physical discomfort**. When attempting to change behavior by changing motivation, **the key target is the momentary wants and needs** (West et al. 2020).

When the interview participants were asked if they purchased with want or need as initial motivation, the answers were pretty divided. Several mentioned need as the primary reason for shopping for clothes, accessories, shoes or home textiles. However, **everyone estimated that their closet contained far beyond the 85 pieces**, which is what 'Unfit, Unfair, Unfashionable' research calculated as **a sufficiency-wardrobe for a four-season climate like Finland**.

The guesstimates of how many garments each interviewee owned, not including underwear or socks, ranged from 100 to 800 pieces and in few cases the participants said that they would rather not even think about it. Additionally, most participants admitted that they use **less than half of their wardrobe actively**. In some cases, the guesstimate was as low as 10% of the garments in their closet being in active use.

Several participants mentioned that they did not follow fashion, but rather wore what they felt at home in. Their choices were either based on their style preferences or what made them feel physically comfortable. Some mentioned that they were brand loyal because they usually found items that fit their style from the same reliable brands. The two youngest participants mentioned that they felt that their style was evolving as they explored different clothing options.

Sometimes the line between an item that is a great find in general to what is great find for your own style and needs is tough to establish. But as one participant (*person M, female 25–34*) said:

Kirppareilta löytää usein tosi kivoja vaatteita, mutta on oppinut olemaan ostamatta, jos ne ei ole oman tyylisiä.

-o-o-

From flea markets you often find really nice clothes, but I have learned to not buy, if they are not my style.

Several participants mentioned that they got a lot of joy out of clothing or shoe acquisitions. Few mentioned that they felt a bit of peer pressure to look the part, especially when it came to athletic apparel. And then there was **the allure of a bargain** that was summed up by two participants (*persons I & J, females, 45-54*) with laughter:

Useimmin nykyään ostan tarpeeseen. Paitsi jos halvalla saa laatua, niin kuka sen voi ohittaa? Siin sit sumenee järki.

-o-o-

Most of the time nowadays, I buy for need. Except if you find quality for a cheap price. How can anyone pass that? Then the mind gets hazy.

Niin, jos saa jonkun kivan jutun puoleen hintaan, vaikka ei sitä tarvitse!

o-

o

Yes, if you get some nice thing half off even if you don't need it!

This serves as an example of the irrationality of our minds. If we stopped and thought rationally, we obviously would conclude that buying an unnecessary item is hardly a way to save money.

5.3.2 Motivation from respecting the garment or investment.

By **recognizing our cognitive biases**, we are likely to recognize **our blind spots**. As discussed earlier, the strengths in our evolutionary brains have not necessarily evolved at the speed of the societal structures we have created.

This has resulted in those strengths of our brains to work against us. **But by understanding our evolutionary brain, including our cognitive biases, those initial strengths can return, if used according to their ability.**

While for some of the interview participants, a direct knowledge of what the supply chain looked like or who made the actual item, **created a good feeling, others expressed regret** for the past purchases of fast fashion items, mentioning the Finnish word “morkkis” - translating to a moral hangover. For many, the antidote to this dilemma was to wear even the inexpensive items for extended periods of time. Example of feel good moment from Person R:

Viimeksi ostamani kodin tekstiiliin oli Suomessa tehdyn. Mutta oli myös tosi kivaa ostaa sellainen tekstiili, jossa oli nimetty artesaani, joka oli tuotteen tehnyt. Tälle yritykselle oli tärkeää, että he työllistivät henkilöitä tässä yhteisössä. Siitä tuli itsellekin hyvä fiilis.

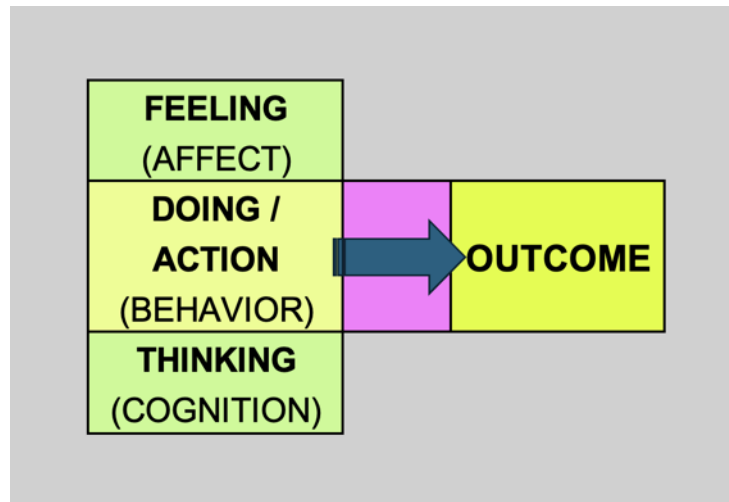
-o-o-

My last hometextile purchase was manufactured in Finland. But it is also really nice to buy a textile, where you get to know the name of the artisan. For the company it was important to employ people in the specific community. That also made me feel good.

Commonly, here in Finland, our clothes live through different cycles of usefulness. For example, for several interviewees the clothes were first used as a neat attire for work or events, then downgraded to be worn during yardwork or hobbies, then once more downgraded to backup summer cottage wear, which may or may not ever get used. The very last step often was a rag for the garage work or some sort of cover in a shed. This for many participants was done for two reasons: **out of respect for the garment and also for getting one's money's worth.**

5.4 B for BEHAVIOR CHANGE

In very simple terms, **behavior is what we do. It can usually be observed or measured. Behavior change focuses on modifying our action, which often leads to a different mental state and different outcome.**



The outcome comes from action - not from simply thinking and feelings. Chart based on information from Amy Bucher's lecture.

For example, changing eating habits, exercising and/or taking a weight loss drug can lead to weight loss. Weight loss is not behavior, but the outcome from one or multiple behavior changes. While I may be somewhat interested in weight loss after all the hours of sitting by the computer writing my thesis, **my research focuses on what actions could create the outcome of lower fashion consumption. Not just lower fashion consumption this year, but also in the foreseeable future.** And in order for that change to be lasting, **the outcome needs to offer enough motivational factors to keep us doing a set of behaviors that get us individually and collectively to this outcome.**

According to Amy Bucher, Ph.D, **an important part of behavior change design is to consider how the change would advance anyone's personal goals, as well as the common good.** So, finding that **overlap between our wants as fashion consumers and the need of the ecosystem** is a crucial part of designing lasting behavior change.



92 million tons of textile waste is discarded every year, about 39,000 of it is illegally dumped into the Atacama Desert in Chile. Think First, Buy Second. Image Credit: Vestiaire Collective (AI created) and Desiero Vestido (Real).

It requires serious consideration of how the intervention is framed. **If the framing puts the individual goals into focus, it is more inviting than when the focus is on some large abstract goal that is too far from our daily activities.** Additionally, it is good to grasp that **behavior intervention describes any method that is designed to facilitate behavior change.** This can be done through an app, it can be a conversation or influential social media content.

Additionally, according to Dr. Bucher, things like **goal or target setting** as well as **action planning** can be **great techniques for helping people to realize and break their bad habits that happen often subconsciously or are based**

on impulse. Since sometimes ‘a pattern library’ for the new behavior does not exist, a model for new behavior needs to be created. This can be an amazing opportunity to expand people’s notions of what appropriate behavior looks like. And the idea can be sold for example through education or persuasion.

INFLUENCING MOTIVATION:	
PLANS	<ul style="list-style-type: none"> 📌 EDUCATION & ENABLING FOR CLEAR PERSONAL GOALS/ ACTION PLANS. 📌 TRAINING FOR WHEN TO APPLY THE PLANS.
EVALUATIONS	<ul style="list-style-type: none"> 📌 EDUCATION & PERSUASION FOR UNDERSTANDING THE POSITIVE AND NEGATIVE OUTCOMES FROM OUR BEHAVIOR.
MOTIVES	<ul style="list-style-type: none"> 📌 EDUCATION, PERSUASION, TRAINING, INCENTIVIZING, COERCING & MODELING TOWARDS POSITIVE AND AWAY FROM NEGATIVE BEHAVIOR OUTCOMES.
IMPULSES & INHIBITIONS	<ul style="list-style-type: none"> 📌 TRAINING & ENABLING FOR STRONGER HABITUAL ENGAGEMENT IN POSITIVE BEHAVIOR.
RESPONSES	<ul style="list-style-type: none"> 📌 MODELING DESIRED BEHAVIOR TO TRIGGER AUTOMATIC IMITATION.

Influencing motivation. Information based on Dr. Amy Bucher’s lecture.

While the group interviews along with the literature review helped inform people’s **thinking behind their actions** and everyday life choices, it will take some time to form behavior design plans that would fulfill both the personal needs for expressing ourselves and the needs of the ecosystem.

None of the people interviewed seemed to be compulsive shoppers, but looking at the data on how many garments, on average, people purchase annually, it can not be that rare. According to a study by Dr. Lorrin Koran from 2006, about 6% of the population could be classified as compulsive shoppers. While an equal number of women as men have this habit, women are more likely to manifest it in fashion and jewelry purchases, whereas men are more likely to buy technology, tools and electronics. The important differentiating factor between compulsive shoppers and passionate collectors is that the former loses interest in the items as soon as they own it (Hamilton, 2008).

But what about the fashion influencers who showcase their “haul” in social media, quickly moving on to the next “haul” or their followers who mimic the

same behavior? New York psychologist April Benson, also an author of “To Buy or not to Buy: Why we overshop and how to stop” says that while physicians and therapists dealing with compulsive shoppers want their patients to buy mindfully, the marketers are constantly promoting mindless buying. Her concern is not as much what part of the brain is activating, but rather more holistically the culture of consumption. What are people really looking for when they aimlessly consume - **love, revenge, affirmation, belonging or perhaps control?** (Hamilton, 2008)

My vague hope was to discover something meaningful from having conversations around behavior based on values (taken from Green Gap study). Perhaps some direction for a roadmap for more sustainable behavior. However, the conversations in my group interviews did not really lead to any conclusive results - maybe because of the small sample of twenty people, perhaps because the thinking and actions are two very different things.

If anything, the individuals who cared less about global issues also cared less about fashion and purchased fewer clothes than the ones who were more concerned with the world as a whole. This does not mean that the individuals who were fairly uninterested in fashion, did not have other consumption interests, such as cars, boats, electronics, houses and so forth. However, consumption habits or ecological footprint outside of fashion was not the topic of this research, even if a wider behavior change in our lifestyle is part of the end goal.










5.4.1 Novelty, not newness, to the rescue.

My conversation with Liisa Jokinen, a vintage fashion lover, the founder of HEL Looks and NYC Looks as well as GEM search engine for 2nd hand clothing items, covered a lot of ground in fashion, style and 2nd hand markets, but for this thesis the most relevant part was around the fashion consumer’s desires.

GEM, which Liisa has developed with her husband Sampo, is widely used and well respected. This gives her a unique global knowledge of style-centric

secondhand sourcing at the intersection of fashion and technology. Liisa also has been tapping into the vintage, art, and counterculture scene through her street photography. Since she started HEL Looks in 2005, it would be only fair to give her credit for being one of the OGs of social media-based street photography phenomenon.

The idea for GEM came from Liisa and her husband Sampo's discovery of their friends' frustration. The desire to buy and sell secondhand items was clear, but the time and effort involved in finding what people wanted was just too much for most people's already busy lives. Nowadays, GEM and other technological helpers are plentiful and make finding used options almost as easy as finding new ones.

	Good	Neutral	Evil
Lawful			
Neutral			
Chaotic			


© TELEPORT

Technology for 2nd hand items rated by Teleport (a resale app).

All Liisa's ventures have started as passion projects. Her passion has mostly been rooted in fashion and people's individual styles. The revelation to start HEL Looks came from the lively Glam-rock scene in Finland. This sliver of youth culture had developed partially from Hanoi Rocks music and the visuals were unique even from a global perspective. Compared to, for example, Stockholm's fashion scene, the Helsinki fashion and style scene in 2005 was noticeably more about individual style and used a lot of 2nd hand and hand-me-down pieces. Liisa felt the need to document this phenomenon. She also has documented the unique and inspirational street styles in New York since 2017. Her own style is a prime example of how various ways of combining unique 2nd hand finds can add up to a curated and quirky individual expression.

 **hellooks**
Helsinki



...  **nyc_looks**
Gowanus, Brooklyn, Ne... ...



Individuality is the focus in HEL Looks and NYC Looks.: Tommy, 17 in 2006 in Helsinki, Nova, 21 in 2024 in New York. Permission to use @hellooks and @nyc_looks images granted by Liisa Jokinen.

And for our brains, the joy of hunting and discovering something novel is as much in secondhand shopping. Just as Dr. Duhaime described in her research; our brains crave for something that is new to us, which does not mean that our fashion purchases must be brand new. We are actually looking for novelty to break our routine.

In Liisa's opinion, which I happen to share, there is no such thing as sustainable or fully responsible new garment. She thinks that all the new production can be considered as "extra" especially from a resource perspective, but also points out that 2nd hand consumption can be done irresponsibly. Both the 2nd hand platforms and the consumer can be acting in a manner that is not quite ethical nor sufficiency minded. In her opinion, **secondhand and vintage shopping is not "an automatic solution" even if it is a step in the right direction.**

5.4.2 Brand heritage to the rescue.

Thanks to the kindness of Manna & Co, I was granted an interview with Jukka Kurttila, co-owner and creative director of Finlayson, one of the brands under

Manna's umbrella. Additionally, I was allowed access to Green Gap, Finlayson's internal research about consumer behavior.

Mr. Kurttila's career has spanned from building a successful marketing firm to purchasing and running Finlayson before becoming the creative director of the brand. He is known for his direct, sometimes even controversial, way of communication at the intersection of branding, political activism, sustainability, and consumer behavior.

When I asked Mr. Kurttila how a marketing and branding visionary ended up being a spokesperson for responsibility and sustainability in the fashion and textile industry, he chuckled. Half-jokingly he said that he had always thought that marketing guy was the lowest form of existence. That was until he discovered the textile industry. Getting more serious, he added that it was clear that Finlayson could not compete with the global giants on volumes and prices, so they looked into the brand heritage for direction.

Finlayson's history dates back to the early 1800's when a Scottish industrialist saw the opportunity to harness nature for a textile mill. Along with job creation also came the building of crucial community infrastructure including employee housing, hospital, school, daycare and church. When Mr. Kurttila along with two partners purchased Finlayson in 2014, they wanted to honor the responsible foundation. In recent years, that path has included sustainability measures like GOTS material certificate and facilitation of third-party auditing systems into their partner factories. There have also been clever marketing campaigns to call out the irresponsibility of their competition, which have gotten both praise and criticism.

As we pondered the possibilities of more pro-environmental behavior, conversation turned first to legislative support for incentivizing more responsible products and a circular economy. While Mr. Kurttila sees the current EU legislative direction as good; he believes that the companies looking for loopholes in the global supply chain will find them in the future as well.

When we talk about changing people's mindsets and values, Mr. Kurttila mentions that while not realistic, it would be eye-opening to bring the processing of textiles and manufacturing, the way it is done in unregulated places, next to our own homes and summer cottages. Perhaps seeing the child labor and ecological damage in our own environment would shake things up a bit.

Mr. Kurttila summed up the consumer attitude fittingly:

Miten päin helvettiä asioiden pitää olla, että jengi alkaa tajuamaan, että on vaan aika välittää pikkusen enemmän.

-o-o-

How much towards hell do things have to be for people to realize that it's just time to care a little bit more.



Aika valita



Finlayson
435 subscribers

Subscribe



1



Share



Save



199K views 1 year ago

Sanovat, ettei yhden ihmisen valinnoilla ole väliä. Se on suuri vale, jonka hokeminen tulee lopettaa. Todellisuudessa jokainen hyvä valinta on askel parempaa kohti.

*Finlayson sometimes uses a dose of fear to jolt the consumer's comfort level.
Image credit: Aika Valita. Finlayson. You Tube.*

While the current economic downturn is testing Finlayson's own ability to navigate the rough seas without cutting too many corners, hopefully the future will hold fairness in their supply chain as well as integrity in their product even if wrapped inside a provocative marketing message.

5.4.3 Marketing and entertaining education to the rescue.

While marketing schemes to sell more items have existed for quite a while, over time the marketing machine has become significantly more sophisticated. And undoubtedly, the biggest driver for it is **our current economic structure, which relies on constant growth** – not just in the fast fashion sector but also in the luxury sector. While the economic structures are not the focus of this thesis, it is good to keep in mind while thinking of the macro scenarios.

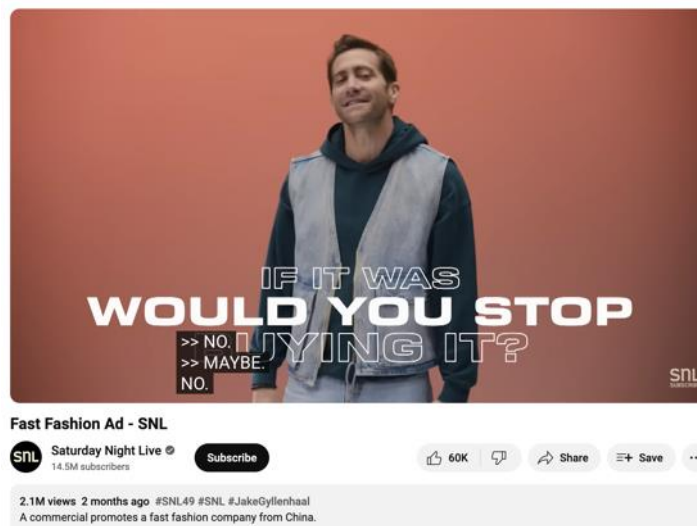
Whether it was **the goal or byproduct of multi-channel data collecting and efficient analytics, our personal data knows more about our behavioral patterns and preferences than we do ourselves**. However, my personal experience from a few years back when I was categorized as gay male living in San Francisco, also showed that **the data assumptions** are not always quite accurate. In many ways it was comforting that the combination of unisex sounding name and habit of researching my students' collection inspirations on my personal devices, I was simultaneously an anomaly and linked to a population that I have closely associated with while studying and working in the fashion industry.

One very effective hook for moving merchandise is the speed in which new trends are introduced in social media and other social networks. During the incubation of this thesis there have been hundreds and hundreds of TIKTOK viral trends from mob wife to coquette to tomato girl to cottage core to dark academia and so forth. The micro trend discussions have conveyed that metallics, asymmetric hemlines, roses, fringe and feathers have been in, as has gingham, lace, satin and pinstripes. And naturally we have moved on a long ago from millennial pink and Barbie pink to Brat green. Micro bags are out, while large bags are in, sneakers are major, except for chunky sneakers, which are out. Camo is out, chita is in. Tight pants are out, relaxed ones in, slim pants are in, but baggy pants are out. Wait what?

The good news to everyone interested in fashion trends is that you can always find some source that agrees with you. And if you were a bit slow to react to a

viral trend, don't worry, it is untrendy by now anyways, so better just stick to a style that suits you and your actual everyday life. And even if few and far between, **there are some social media movements focusing on anti-overconsumption** (Cernansky, 2024).

I am glad that there are increased initiatives to regulate how big data can take advantage of our **FOMO** (fear of missing out) and other weaknesses. I much rather be personally in charge of my data and share it with whom I choose. Until then, I am determined to understand the manipulation techniques and send only mindful messages out into the world. While **YOLO** (you only live once), I **authentically embrace JOMO (joy of missing out) on regular bases.**



Saturday Night Live delivers a serious message wrapped in comedy. Image Credit: Fast Fashion Ad - SNL. You Tube.

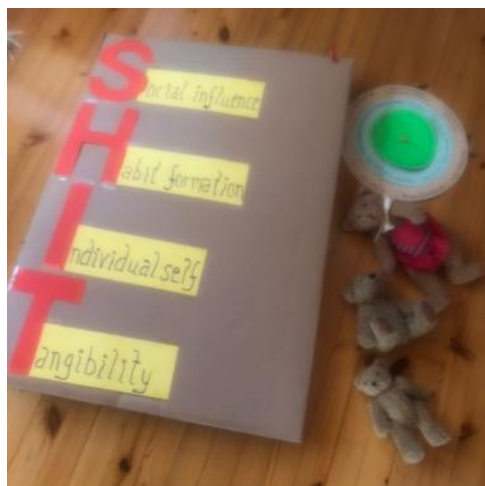
For State of Sisu, the exciting challenge will be to create content that is first and foremost entertaining, but also factually accurate and educational.

6 Oh SHIT, can we really change?

For years, despite going through several decluttering rounds based on Marie Kondo's method, I dreaded counting my stuff. I sorted, I

donated, I transformed, I sold second hand. I figured out the colors and models that work for my color type and body shape. I figured that I actually only love “natural” fabrics, like cotton, wool, silk, and cashmere - and “naturally” phased out anything polyester or acrylic from my closet. My wardrobe transformed a lot, it became intentional, matching, and beautiful. But counting how many things are in it was always a big psychological no no for me for some reason. *Katia Dayan Vladimirova, 3.3.2024 in her Substack Postgrowth Fashion article titled: “The unbearable lightness of... writing down your wardrobe.*

Most people I interviewed had a rough system in place for organizing and editing their wardrobes; be it seasonal rotation of their garments or periodic Kon Mari: Ing (Kondo 2014). As mentioned earlier, every single person I interviewed could tell me, without hesitation, that they **only used part of their wardrobe actively**. While the reasons for holding onto things that don’t fit our current body or lifestyle may vary, it is a fact that most of us have; what Timo Huhtamäki, a circular business model advocate, calls “sleeping capital” in our wardrobes. **0% of the group interview participants had calculated or analyzed their wardrobes**, which admittedly is a daunting and time-consuming approach - even for people involved in fashion sustainability research.



'Self-help' techniques and informative literature can help organize our wardrobes and minds. Image Credit: self of process board and stack of books including Planetaarinen Vaatekaappi by Sissi Penttilä & Aku Varamäki (2024).

Simple math, like calculating how many pairs of jeans, or party dresses we own, can be enlightening when **we think about our needs and wants** or **when we feel that we have nothing to wear**. For the statistic geeks, making a more detailed spreadsheets can give a deeper understanding of the common denominators of our favorite garments could come from a list:

- What is the color?
- What is the fiber content?
- How frequently an item is used.
- How does the item feel?
- How is the quality?
- Where was the item manufactured?
- What brand designed the item and when?

However, **our own style and lifestyle should guide** whether we embrace minimalism, Finimalism, voluntary uniform dressing or 'mob-wife' maximalism. Just as I know from having designed and developed items for different age, gender, size, budget, social status and lifestyle requirements, **there is no universal 'one size fits all' method** other than **'you do you' - in moderation**.

Being good is important, but from time-to-time we humans also have a need to be bad. So, perhaps the best advice I can come up with:

- **aim for balance.**
- **use some simple mental process;** even counting from 5 to 0 before making a decision will take us beyond the first impulse.

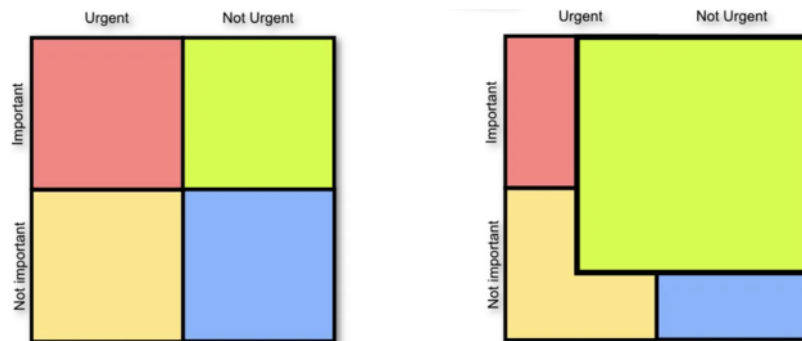
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I have two kinds of problems, the urgent and the important.

The urgent are not important, and the important are never urgent.

Dwight 'Ike' Eisenhower, the 34th President of the US in 1954.

With a bit of imagination and modification, most tools for organizing our mental models can also serve as vehicles for moderating our consumption habits and creating reminders of our priorities. For example: **Urgent**: things that require our immediate attention vs. **Important**: things that don't require immediate attention but help achieve long term goals.



Eisenhower Matrix of Urgent vs. Important matters could be used as a wardrobe improvement and maintenance tool. Image Credit: Samir Dayal Singh.

We can use the matrix to create sections for:

- do, schedule, delegate and delete.

Or to create an action plan for separating our immediate and urgent clothing needs from our long-term needs and investment worthy desires. This could include **important but not immediate** tasks like:

- cleaning & mending of winter coats sometime between now and next fall.

Or **urgent needs** like:

- finding a sun hat or scarf to protect from the intense rays of sun.

The harder part may be looking in the mirror, figuring out what we love to wear in our current roles. Also, coming to terms with the reality that buying new things to impress others or to make ourselves feel better can only take us so far. For some, the inspiration to change can come from spirituality, for others from personal wellbeing goals, but it often requires support from family, friends or

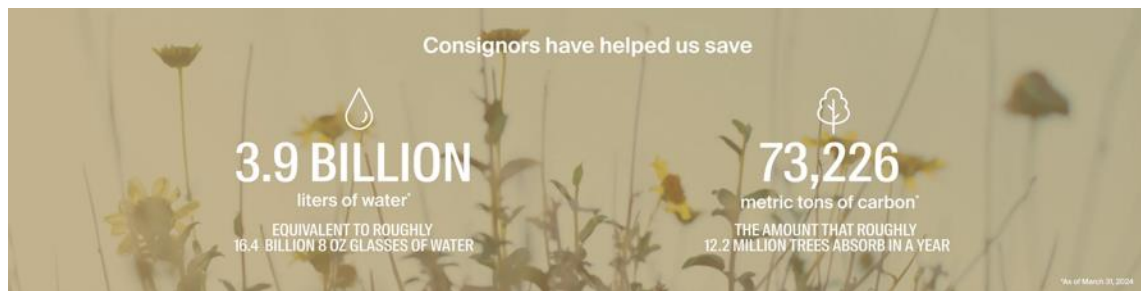
some other community. The key to change is finding what authentically resonates with each and everyone of us.

6.1 My attempt to lead by example.

I could talk about how clever I have been in my ability to expand my clothing options. In fact, my high-school yearbook said that my closet must be the size of a gymnasium, based on my readiness to have something appropriate to wear; no matter what the occasion was or how spontaneously it happened. While I didn't actually have a closet the size of a gymnasium, I did have access to my mum's, my dad's, my brother's and occasionally to my grandmother's closets along with my own. Additionally, I got hand-me-downs from my older cousins as well as bigger fabric than clothing allowance from my parents to support my design and making aspirations.

Even though money was not plentiful in my youth, I had not lived during wartime like my grandparents, or post-war like my parents, when frivolous fashion was rarely an option. Consequently, I did not feel a stigma from my interest in fashion nor from mixing old, new, and borrowed items.

Or I could talk about how I have been a responsible fashion shopper. For example, most of the additions to my closet in the past decade have come from secondhand sources. I actually have been a member of 'the world's largest and most trusted resource for authenticated luxury resale' since 2012 when it was founded and bought and sold a few hundred items for the benefit of myself, my family and my students, who needed to understand the quality of the craft in different price ranges. I could also add up the calculations of how much water and CO₂ I have saved by choosing secondhand from all the handy calculations that came with my purchases. But how much lower would those numbers be if I would have bypassed even some of the transactions all together?



Example of tangible benefits from circular business models. Image Credit: The Real Real, luxury consignment company and a founding member of the American Circular Textiles Group (ACT).

Or I could talk about the one specific collection [Fall/Winter 2006], from a famous designer I worked for, that takes at least 2/3 of sufficiency wardrobe allowance for me. But that's ok, because the items came from one-of-a-kind development samples and as my employment contract perk. And some more came from that above mentioned resale site many years after the collection was made. And because I loved the collection, including the color story, the materials, the quality and the styles so much that I wear the pieces frequently. I also knew the fit and sizing by heart, so buying it online is not a problem. I even still am in touch with the wonderful fit model and the heart of the whole operation with whom I spent countless hours in the fittings analyzing how to turn the runway samples into garments that fit a wider (and shapelier) audience.

I could still tell the details of the decisions made in the design meeting, and how the most skilled patternmaker, sample maker, and cutter teamed up to create the runway samples. I could also tell that they were paid well above industry standards, because I did the payroll when the most advanced technology could not be trusted to handle our crazy working hours before the shows. I could still mention some of the mills the fabrics came from. I could make an educated guess of which factories in New York City the production was done and the conditions in those factories, because I have spent some time in them. So, simply put, I could purchase and wear the clothes with a rather clear conscience. And considering that the specific fall/winter collection will soon be considered vintage, I certainly can vouch for its longevity in general and especially in my wardrobe.

But instead, I want to highlight a recent situation. More specifically, when my daughter, our dog and I moved to Finland from the US, nine months before my husband or the shipping container with our belongings were able to leave San Francisco. Not so different to many immigrants, at least the luckier ones, we traveled with two suitcases each.

This is when I truly discovered how little one needs as far as fashion items go. Not that I wasn't glad to see those items from my favorite collection when we finally found a more permanent resident and reunited with the full content of our shipping container – 15 months after my daughter and I had left with the two suitcases each. We also had not purchased clothing items beyond #rule of 5 allocation during those 15 months. We simply had so many other things to tend to, that rarely did it feel that we were somehow sacrificing our quality of life.

Quite the contrary - actually.

7 Conclusion

Even though we are very busy living our lives, taking advantage of all the convenient and easy shopping choices, it is good to pause and let this situation sink in. If **there is no behavior change now**, the consequences are dire, especially for the future generations.

Or alternatively we can maybe solve the situation by absorbing so many environmental toxins that we cannot reproduce. Wearing ultra-fast fashion containing 300-400 times the allowed limits of forever chemicals would be a good start (Le Monde, May 28, 2024). Those clothes that come to our mailboxes, without any governmental inspection, because we need cheap newness in our lives. Those clothes that are ordered in such high volumes that the air-cargo and mail services are clogged (McLymore 2024). Between the

chemicals and the microplastics taken in through our epidermis and respiratory systems then ending up in our reproductive organs could help us get to a **new kind of survival of the fittest**.

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COMMON DENOMINATORS FOR ALL THE GROUP INTERVIEW PARTICIPANTS REGARDLESS OF THEIR AGE, GENDER, RACE, EDUCATION, GEOGRAPHIC LOCATION OR VALUES:

- 📌 100 % MENTIONED SOME CAPABILITY, OPPORTUNITY OR MOTIVATION REASONING FOR NOT BEING MORE PRO-ENVIRONMENTAL OR SUFFICIENCY MINDED.
- 📌 0 % MENTIONED PHYSICAL CAPABILITY BARRIERS FOR SUSTAINABILITY ACTIONS.
- 📌 100 % HAD SOME KNOWLEDGE OF FASHION SUPPLY CHAIN SUSTAINABILITY ISSUES.
- 📌 100 % PARTICIPATED SOMEHOW IN CIRCULAR ECONOMY PRACTICES SUCH AS SELLING / BUYING 2ND HAND ITEMS, DONATING, MENDING OR RECYCLING.
- 📌 100 % OWNED MORE THAN 85 PIECES OF CLOTHING AND SHOES, WHICH IS CONSIDERED A SUFFICIENCY WARDROBE FOR FOUR SEASON CLIMATE, BUT SEVERAL CONSIDERED THEIR PURCHASES TO BE BASED ON NEED RATHER THAN WANT.
- 📌 0 % HAD CALCULATED HOW MANY CLOTHING / HOME TEXTILE ITEMS THEY OWNED.
- 📌 100 % BELIEVED THAT THERE IS A CONNECTION BETWEEN CLIMATE CHANGE AND OUR CONSUMPTION HABITS.
- 📌 100 % ONE WAY OR ANOTHER CARED ABOUT AND ENJOYED BEING IN NATURE.

The common denominators of all my group interview participants - regardless of their age, gender, race, education, geographic location or values.

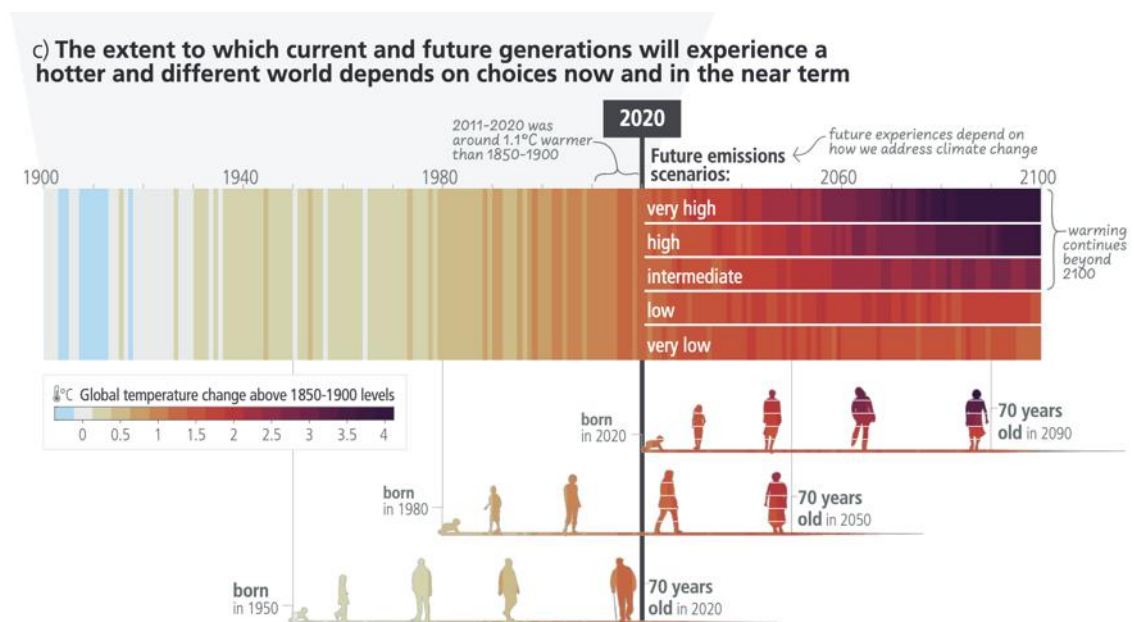
My conclusion:

I found a lot of common denominators between my group interview participants, regardless of their age, gender, race, education, geographic location or values. Whether or not that gave me more hope is another story as shift to sisu, style and sufficiency action was not on anyone's agenda.

- There is a lot of work to be done - not just thinking, feeling and talking, but in growing willpower muscle to act towards a different outcome where the ecosystem's survival would come before our own personal material desires.

- Everyone involved in this research cared about nature, owned a lot more clothes than they actively wore and had several other common denominators regardless of their age, gender, race, education, geographic location or values.
- While our values may drive sustainability thinking and feeling, it is not automatically transferred into our actions.
- In my interviews, the people less interested in sustainability were more moderate fashion consumers than the more sustainability-minded ones.
- Without motivation and consistent proactive efforts, behavior change is unlikely.
- The behavior changes, a key component to sufficiency thinking, is up to all the informed citizens who want to be active participants and are willing to give up something.

While I would love to conclude that using COM-B, PRIME and Behavior Change Wheel would offer simple solutions for a complex problem, I am less idealistic than when I started this research. Tempering my own instincts came as a byproduct of circumstantial changes, but I am still on a lookout for motivators for long-term change for myself and others – with the following image edged on my brain.



Observed [1900-2020] and Projected Changes [2021-2100] in Global Surface Temperatures - relative to 1850-1900. Image Credit: IPCC Article 6

7.1 Limitation and Future Research

In the case of PRIME, I came to realize that it along with COM-B, are actually behavior SELECTION models. In their computable form, they may go as far as to tell us which out of a set of predefined behaviors will occur at a given time, but they are a long way from telling us how behaviors are GENERATED.” *West, 2021.*

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Perhaps the vastness of the topic could be seen as a limitation for this research. However, if nothing else, my personal interest in a holistic view that includes macro and micro parts, has given me as a researcher and me-searcher the most delightful ride and multitude of options for future research.

In my opinion, researching ‘one silo solutions’ – be it a single fiber (like cotton), single technique (like crocheting) or single region (like US or Europe), can only take us so far. Same goes for research or action that **only looks for differentiating factors rather than common denominators.**

Additionally, it is good to keep in mind that some of the data used in this thesis was from research that represents **WEIRD**: the Western, Educated, Industrialized, Rich, and Democratic society, which covers only **about 5% of the human population.** However, from the perspective of where most behavior change is needed, this can be viewed as a strength rather than limitation.

7.2 Final Words

My thesis started with a blurb from the Pikku Juttu / Little Thing challenge, because it is an example of real-life behavior design for consumers (see Appendix IX for results). However, since behavior change initiatives are often in direct conflict with growth minded business practices, industries that can still close their eyes from the reality of finite resources, do exactly that. So, the major push towards

pro-environmental, circularity and sufficiency action will have to come from somewhere that will not benefit from the traditional growth models. And small part of this push could come from out of the box thinking in the consumer de-influencing and fashionable content that highlights the joy from imagining and creating more with less.

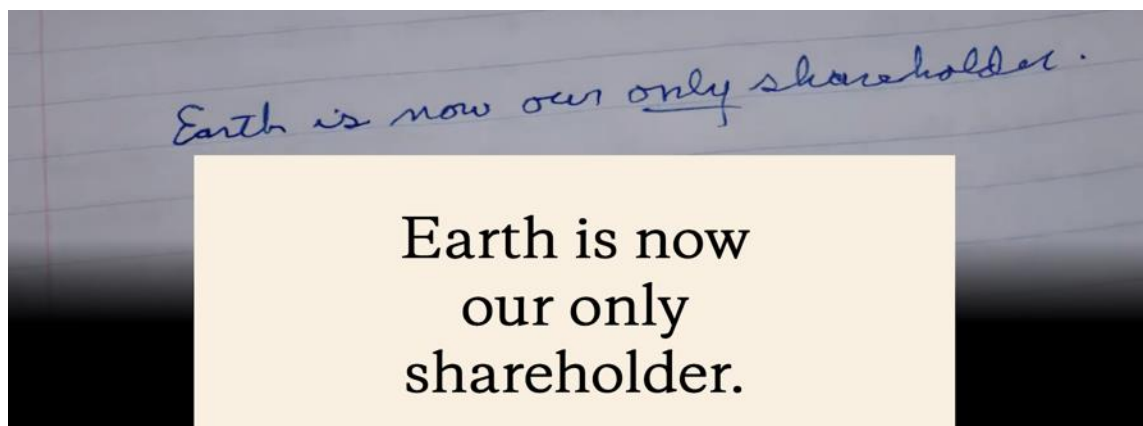
But the truth is that we need **all stakeholders to have 'some skin in the game'** to see more coordinated efforts towards a better fashion industry, improvement in our own well-being and odds for ecosystem's survival. Beyond individual consumer behavior change we need change where the power and money are. While the capitalistic business structure is unlikely to embrace de-growth until there is no other options, efforts like ties between executive compensation and environmental, social & governance (ESG) goals can be a good start. ESG metrics, while not perfect, do have a potential to help contribute to the long-term financial and social wellbeing of a company as well as the welfare of investors, other stakeholders, society at large and most importantly to the survival of our natural environment. But as Matteo Tonello, managing director of ESG points out:

Currently, ESG performance metrics tend to relate to the company's industry: for example, only 24% of information technology companies integrate environmental performance metrics in their executive incentive plans, compared to **80.2% of energy companies**. As organizations integrate sustainability more deeply into their operations, they should select incentives that give them a competitive advantage while serving a broader societal purpose.

While my thesis has focused on **the use phase and human behavior change at the consumer level, behavior change is needed as much in the up- and downstream phases**. The efforts of the fashion and textile industry to integrate environmental performance metrics into their executive incentive plans are few and far between. A recent report by Planet Tracker, reviewing the executive compensation and sustainability policies of 30 largest consumer facing fashion

and textile brands, showed that only two companies, Adidas and Puma, had clear annual objectives and reporting, which are prerequisites for an effective sustainability plan (Planet Tracker, 2023). **This does not mean that those two companies are problem free, especially** when it comes to **work conditions and wages**, but it does signal that **some sustainability issues are taken more seriously**.

Additional discovery was that the fashion companies that had a link between sustainability and compensation also had sustainability goals linked to Science Based Targets, which are externally evaluated targets in line with the 1.5C trajectory recommended in the Paris Climate Accord (Science Based Targets). It was noted that European companies were ahead of their US and Asian counterparts. Also, founder or family-owned companies were more likely to have sustainability-linked performance pay (Planet Tracker, 2023).



Earth is now our only shareholder. Yvon Chouinard 2024. Image Credit: Patagonia. Full letter in Appendix X.

Real change can start with some imagination inside the current system, rather than waiting until the next system is developed. For example, Yvon Chouinard and his team managed to change the shareholder of Patagonia. Something similar could happen in several other companies if they had enough vision and willpower. While other fashion companies like Eileen Fisher, have shown similar interest in doing well while doing good, many others could follow suit.

When I asked the experts at a recent Aalto University panel discussion if there was any likely change in fashion sustainability trajectory for example through sustainability and executive compensation ties, I got three answers:

- Lutz Walter, textile innovation expert, emphasized that **sustainability is a long-term game with long term thinking, ownership and real engagement**, which can create a new breed of purpose driven companies.
- Drishti Masand, materials engineer and sustainability expert from Adidas said: **"Accountability tied to leadership targets changed how sustainability was being discussed within the company!"**
- Ali Harlin, research professor and industrial inventor said; **"One leader is the customer. (It is a) very strong leverage if the consumption model changes."** He also mentioned the spillover effect, the need to avoid the free-riders and emphasized that one key question in this whole equation: "Are all the building blocks in place to achieve something?"

Especially as the big fashion brands are both laying off parts of their sustainability teams and watering down their climate targets (Pucker, August 23, 2024), I return to Dr. Harlin's point, which has also been the focus of my thesis: consumption model change is a very strong leverage - potentially.

There is hope if there is action – not just thinking and feeling.



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Thank you for reading!

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Bibliography:

Akenji, L., Bengtsson, M., Toivio, V., Lettenmeier, M., Fawcett, T., Parag, Y., et al. (2021). 1.5-Degree Lifestyles: Towards A Fair Consumption Space for All. Hot or Cool Institute, Berlin. ISBN 978-3-98664-012-5.

<https://hotorcool.org/wp-content/uploads/2021/10/Hot_or_Cool_1_5_lifestyles_FULL_REPORT_AND_A_NNEX_B.pdf> Accessed on September 23rd, 2023.

Akenji, L. and Chen H. (2016). United Nation Environment Programme. A Framework for Shaping Sustainable Lifestyles: Determinants and Strategies.

<https://www.oneplanetnetwork.org/sites/default/files/a_framework_for_shaping_sustainable_lifestyles_determinants_and_strategies_0.pdf> Accessed on September 23rd, 2023.

American Academy of Pediatrics. Council of Environmental Health (November 1st, 2015). Global Climate Change and Children's Health.

<<https://publications.aap.org/pediatrics/article/136/5/992/33836/Global-Climate-Change-and-Children-s-Health?autologincheck=redirected>> Accessed on August 1st, 2023.

American Psychological Association (2012). Personality. What you need to know about willpower: The psychological science of self-control.

<<https://www.apa.org/topics/personality/willpower>> Accessed on May 23rd, 2024.

Bedat, M., (2021). Unraveled: The life and death of a garment. New York: Portfolio, 2021. ISBN-10 : 0593085973.

Bergquist, M., Thiel, M., Goldberg, M H., van der Linden, S. (2023). Field interventions for climate change mitigation behaviors: A second-order meta-analysis. PNAS, Sustainability Science. Volume 120, No. 13.

<<https://doi.org/10.1073/pnas.2214851120>> Accessed on January 31st, 2024.

Bernays, E., (1928). Propaganda. Ig Publishing, Brooklyn, NY. Page 9. ISBN-10 : 9780970312594.

Björk, J. (April 22nd, 2011). Mainstream Green: Moving sustainability from niche to normal - based on Ogilvy Earth study. Goodlifer Blog.
<<http://www.goodlifer.com/2011/04/mainstream-green-moving-sustainability-from-niche-to-normal/>> Accessed on July 10th, 2024.

Bucher, A. (2020). Engaged: Designing for Behavior Change. Rosenfeld Media. ISBN-10 : 193382042X.

Bucher, A. (2022). Behavioral Design: Using the COM-B Model of Behavior Change in UX. Denver UX Newbies. You Tube.
<<https://www.youtube.com/watch?v=UWgVpXmuUnQ>> Accessed on April 15th, 2024.

Cap, S., de Koning, A., Tukker, A., Scherer, L. (2024). (In)Sufficiency of industrial decarbonization to reduce household carbon footprint to 1.5C-compatible levels Sustainable Production and Consumption. Volume 45, pages 216-227. <<https://doi.org/10.1016/j.spc.2023.12.031>> Accessed on January 17th, 2024.

Catton WR. Overshoot: The ecological basis of revolutionary change. (1980) Illinois, USA: University of Illinois Press.
<<https://www.jstor.org/stable/10.5406/j.ctt1hfr0mh>> Accessed on January 15th, 2023.

Coscieme, L., Akenji, L., Latva-Hakuni, E., Vladimirova, K., Niinimäki, K., Henninger, C., Joyner-Martinez, C., Nielsen, K., Iran, S. and D'Itria, E. (2022). Unfit, Unfair, Unfashionable: Resizing Fashion for a Fair Consumption Space. Hot or Cool Institute, Berlin. <https://hotorcool.org/wp-content/uploads/2022/12/Hot_or_Cool_1_5_fashion_report_.pdf> Accessed on August 28th, 2023.

Cernansky, Rachel (January 25, 2024). TikTok's anti-overconsumption movement is a wake-up call for brands. Vogue Business.

<<https://www.voguebusiness.com/story/sustainability/tiktoks-anti-overconsumption-movement-rule-of-5-wake-up-call-for-brands> > Accessed on January 25th, 2024.

Chandran, M., Tamilkolundu, S. and Murugesan, C. (2020). Conversion of plastic waste to fuel. Plastic waste and recycling. Academic Press, Cambridge, Massachusetts. Pages 385–399. <<https://doi.org/10.1016/B978-0-12-817880-5.00014-1>> Accessed on April 14th, 2024.

Chaurasia A R. (2020) Population effects of increase in world energy use and CO2 emissions: 1990–2019. MLC Foundation and 'Shyal' Institute. The Journal of Population and Sustainability 2020; Vol 5: 1, 87–125.<<https://www.whp-journals.co.uk/JPS/issue/view/49/13> > Accessed on January 12th, 2024.

Collins, Hilary (2019). Creative Research: The theory and practice of research for the creative industries. Second Edition. Bloomsbury Visual Arts. Chapter 26, Chapter 27, Chapter 29. Pages 136-139, 143-144. ISBN-10 : 1474247083

Creswell, John W. (2013), Qualitative Inquiry & Research Design: Choosing Among Five Approaches. 3rd edition. Sage Publications. Inc. Pages 76-83, 166-170. ISBN-10 : 1412995302

Creutzig, F., Joyashree, R., Lamb, W F., Azevedo, I M L., Wändi B de B. et al. (2018). Towards demand-side solutions for mitigating climate change. Nature Climate Change Vol. 8, Issue 4.

<<https://www.proquest.com/docview/2021295416?parentSessionId=UQiSsZx%2BXDJQVeUPFfuKN48OY8z0ddavCots%2BDtxKbw%3D&accountid=11363&sourceType=Scholarly%20Journals> > Accessed April 5th, 2024.

Deeply Research for Finlayson. Green Gap. For internal use @ Finlayson and Manna & Co.

Design for Health Organization. Demand Side Thinking + Human Centered Design. How can design contribute to global health?

<<https://cquin.icap.columbia.edu/wp-content/uploads/2021/05/CQUIN-HCD-Talk.pdf>> Accessed on May 10th, 2024.

Deserto Vestido. Iquique, Chile. Fashion's waste crisis in the Atacama Desert. Instagram: @desiertivestido_tarapaca

Duhaime, Ann-Christine, MD (2022) Minding the climate: how neuroscience can help solve our environmental crisis. Harvard University Press. Part 1. ISBN 9780674247727.

Dunning, D., (2007). Self-Image Motives and Consumer Behavior: How Sacrosanct Self-Beliefs Sway Preferences in the Marketplace. Journal of Consumer Psychology, Volume 17, Issue 4, pages 237-249.

<[https://doi.org/10.1016/S1057-7408\(07\)70033-5](https://doi.org/10.1016/S1057-7408(07)70033-5)> Accessed on April 15th, 2024.

EU Deposit Return Scheme

<<https://environment.ec.europa.eu/system/files/2021-10/Deposit%20Refund%20Schemes.pdf>> Accessed on April 10th, 2024.

European Commission. Energy, Climate change, Environment. How is the EU making fashion sustainable? <https://environment.ec.europa.eu/topics/circular-economy/reset-trend/how-eu-making-fashion-sustainable_en> Accessed on April 15th, 2024.

European Environment Agency (January 24th, 2024). What happens to our used textile products such as discarded clothing or shoes?

<<https://www.eea.europa.eu/en/about/contact-us/faqs/what-happens-to-our->

[used-textile-products-such-as-discarded-clothing-or-shoes](#) > Accessed on April 4th, 2024.

European Environment Agency (March 4th, 2024). The destruction of returned and unsold textiles in Europe's circular economy.

<<https://www.eea.europa.eu/publications/the-destruction-of-returned-and>>

Accessed on April 4th, 2024.

European Parliament (March 5th, 2024). 'Green clams' directive: Protecting consumers from greenwashing.

<[https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2023\)7539_58](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2023)7539_58)> Accessed on April 15th, 2024.

Fashion Revolution (2023). Fashion Transparency Index 2023 Edition.

<https://issuu.com/fashionrevolution/docs/fashion_transparency_index_2023_pages> Accessed September 22nd, 2023.

Fashion Revolution (2024). What fuels fashion?

<https://issuu.com/fashionrevolution/docs/full_report_31_july> Accessed August 21st, 2024.

Finland Deposit Return Scheme. <<https://www.palpa.fi/beverage-container-recycling/deposit-refund-system/>> Accessed on April 10th, 2024.

Finlayson (2023). Aika valita. You Tube. <https://youtu.be/I5CQUmCiNs?si=PTUMnpz_dDrqJNFV> Accessed on April 15th, 2024.

Fogg, BJ, PhD. Hello! <<https://www.bjfogg.com/>> Accessed on May 25th, 2024.

Fortum, Pikku juttu pähkinänkuoressa-blog (January 18th, 2021).

<<https://yhdedssa.fortum.fi/pikku-juttu-pahkinankuoressa>> Accessed on January 15th, 2023.

Gallage-Alwis, S. and Yahouedeou, N. (May-June 2024). Apparel Insider issue 2024. <https://apparelinsider.com/issue-34-may-june-2024-2/> or <https://www.signaturelitigation.com/sylvie-gallage-alwis-and-nikita-yahouedeou-examine-frances-initial-steps-towards-regulating-fast-fashion-in-apparel-insider/> > Accessed in July 12th, 2024.

Gartton, Anna (April 15th, 2024). Out of the Woods: Nordic Countries Take the Lead with a Range of Innovative Fibres. TexFash, Event Report Pulp & Beyond 2024. <https://texfash.com/special/out-of-the-woods-nordic-countries-take-the-lead-with-a-range-of-innovative-fibres> > Accessed April 16th, 2024.

Global Footprint Network (2024). Earth Overshoot Day. <https://overshoot.footprintnetwork.org/>> Accessed on August 15th, 2024.

Hamilton, J. O'C (2008). This is Your Brain on Bargains. Stanford Magazine. <https://stanfordmag.org/contents/this-is-your-brain-on-bargains> > Accessed on March 23rd, 2024.

Held, L.(2009). Psychoanalysis shapes consumer culture. American Psychological Association. December 2009, Volume 40, No.11, page 32. <https://www.apa.org/monitor/2009/12/consumer> > Accessed May 5th, 2024.

Hu C J., Garcia, M A., Nihart, A., Liu, R., Yin, L., Adolphi, N., Gallero, D F., Kang H., Campen M J. and Xu X. (2024). Microplastic presence in dog and human testis and its potential association with sperm count and weights of testis and epididymis. Toxicological Sciences, Volume 200, Issue 2, August 2024, pages 235-240. <https://doi.org/10.1093/toxsci/kfae060> > Accessed on August 17th, 2024.

Intergovernmental Panel on Climate Change (2014). Climate Change 2014: Mitigation of Climate Change. New York, NY: Cambridge University Press. https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_full.pdf> Accessed on September 4th, 2023.

Johnstone, Micael-Lee and Lay Tan (2015). Exploring the Gap Between Consumers' Green Rhetoric and Purchasing Behaviour. *Journal of Business Ethics*, Volume 132, pages 311–28. <<https://doi.org/10.1007/s10551-014-2316-3>> Accessed on October 3rd, 2023.

Jungell-Michelsson, J. and Heikkurinen, P. (2022) Sufficiency: A systematic literature review. *Ecological Economics*. Volume 195. <<https://doi.org/10.1016/j.ecolecon.2022.107380>> Accessed on April 4th, 2024.

Kondo, M. (2014). *The Life-changing magic of tidying up: The Japanese art of decluttering and organizing*. Ten Speed Press. ISBN-10 : 1607747308

Kotsoni, Elektra (April 15, 2024). Welcome to the future of shopping. *Story. Consumers*. Vogue Business. <https://www.voguebusiness.com/story/consumers/welcome-to-the-future-of-shopping?uID=2266f6a25d776f7cc46d813c775d06516f91e4868d33312fd3b7b125b5024784&utm_campaign=newsletter_weekly&utm_source=newsletter&utm_brand=vb&utm_mailing=VB_NEWS_Elektra_MON_150424&utm_medium=email&utm_term=VB_VogueBusiness> Accessed on April 15th, 2024.

Lahti, E. (2019). Embodied fortitude: An introduction to the Finnish construct of *sisu*. *International Journal of Wellbeing*. Volume 9, No. 1, pages 61-82. <<https://doi.org/10.5502/ijw.v9i1.672>> Accessed on August 22nd, 2024.

Lange, F., & Dewitte, S. (2019). Measuring pro-environmental behavior: Review and recommendations. *Journal of Environmental Psychology*. 63, 92–100. <<https://doi.org/10.1016/j.jenvp.2019.04.009>> Accessed on February 2nd, 2024.

Leach, Alec (2021). *The world is on fire but we're still buying shoes*. Published by Alec Leach in partnership with Casimir Books. ISBN: 978-1-7366676-1-3.

Lehtonen, T., Heikkurinen, P. (2022) Sufficiency and Sustainability: Conceptual Analysis and Ethical Considerations for Sustainable Organisation. *Environmental Values* 31(5), 599-618.
<<https://doi.org/10.3197/096327121X16328186623878> > Accessed on April 3rd, 2024.

Le Monde with AFP (May 28, 2024) South Korea: Seoul authorities find Shein products contain high levels of toxic chemicals.
<https://www.lemonde.fr/en/economy/article/2024/05/28/seoul-government-finds-shein-products-contain-high-levels-of-toxic-chemicals_6672910_19.html# > Accessed on May 30th, 2024.

Lenton, T M., Rockström, J., Gaffney, O., Rahmstorf, S., Richardson, K., Steffen, W., Schellnhuber, H J. (2019). Climate tipping points – too risky to bet against. *Nature*; 575: 592–595. <<https://doi.org/10.1038/d41586-019-03595-0> > Accessed on April 1st, 2024.

Liu Y., Zhao R., Xiong X., Ren X. A Bibliometric Analysis of Consumer Neuroscience towards Sustainable Consumption. *Behavioral Sciences*, Vol 13, Iss 4. 2023. <<https://doi.org/10.3390/bs13040298> > Accessed March 27th, 2024.

Maldini, I. (2019). From Speed to Volume: Reframing Clothing Production and Consumption for an Environmentally Sound Apparel Sector. *Product Lifetimes and the Environment*. 3rd PLATE conference, Berlin.
<<https://www.researchgate.net/publication/336148589> > Accessed on March 5th, 2024.

Manno, J. & Fix, A. (2010) Environmental sustainability and sustainable development. International Studies Association and Oxford University press. This version was published in 2019.
<<https://doi.org/10.1093/acrefore/9780190846626.013.169> > Accessed on February 4th, 2024.

McLymore, A., Hall, C., Barrington, L. (21.2.2024). Rise of fast-fashion Shein, Temu roils global air cargo industry. Reuters.

<<https://www.reuters.com/business/retail-consumer/rise-fast-fashion-shein-temu-roils-global-air-cargo-industry-2024-02-21/>> Accessed February 21, 2024.

Mertz, J. (2024). An open letter on climate change. Sterning, blog.

<<https://www.sterning.com.au/blog/open-letter-climate-change/>> Accessed on May 3rd, 2024.

Merz, J., Barnard, P., Sutherland, R., et al. (2023). World scientists' warning: The behavioural crisis driving ecological overshoot. Science Progress 106(3).

<<https://journals.sagepub.com/doi/10.1177/00368504231201372>> Accessed on January 26th, 2024.

Metsä Group. <<https://www.metsagroup.com/>> Accessed on April 15th, 2024.

Metsä Group, Kuura (2024). Kuura tekstiilikuitu tehdas. Uutiset, julkaisut,

lehdistötiedotteet. <<https://www.metsagroup.com/fi/uutiset-ja-julkaisut/tiedotteet/2024/metsa-group-aloittaa-esiselvityksen-kuura-tekstiilikuitutehtaasta--uusi-tehdas-moninkertaistaisi-sellun-jalostusasteen-suomessa/>> Accessed on April 15th, 2024.

Michie, S., van Stralen, M.M. & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Implementation Sci 6, 42. <<https://doi.org/10.1186/1748-5908-6-42>> Accessed on January 10th, 2023.

Michie, S., Atkins, L., West, R. (2014). The Behaviour Change Wheel: A Guide to Designing Interventions. London: Silverback Publishing.

<<https://www.behaviourchangewheel.com/>> Accessed on January 10th, 2023.

Mokka, R. (June 16th, 2022) YLE Kolumni. Tulevaisuuden tutkimus.

<<https://yle.fi/a/3-12438537> > Accessed on June 20th, 2022.

Niinimäki, K. (2018). Sustainable Fashion in a Circular Economy. Aalto ARTS Books. Pages 12-41.

<[https://acris.aalto.fi/ws/portalfiles/portal/32741443/Sustainable Fashion in a Circular Economy.pdf](https://acris.aalto.fi/ws/portalfiles/portal/32741443/Sustainable_Fashion_in_a_Circular_Economy.pdf) > Accessed on April 15th, 2023.

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. Nature Reviews: Earth and Environment, 1, 189-200. <<https://doi.org/10.1038/s43017-020-0039-9> > Accessed on September 22nd, 2023.

Norstat for Suomen Tekstiili ja Muoti (Finnish textile and Fashion Association). Suomalainen kuluttaja 2020 (Finnish Consumer 2020) and Vastuullinen kuluttaja 2020 (Responsible Consumer 2020). Available for STJM members.

Norway Deposit Return Scheme. <<https://www.tomra.com/en/reverse-vending/media-center/feature-articles/norway-deposit-return-scheme> > Accessed on April 10th, 2024.

One Point Five Degree Lifestyles. <<https://onepointfivelifestyles.eu/about-the-project> > Accessed on September 23rd, 2023.

Oswald Y., Owen A., Steinberger J K. (2020). Large inequality in international and intranational energy footprints between income groups and across consumption categories. Nature Energy. Issue 5, pages 231–239. <<https://www.nature.com/articles/s41560-020-0579-8> > Accessed on April 12th, 2024.

Oxford Reference. AIDA.

<<https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095432783> > Accessed on May 4th, 2024.

Penttilä, S. & Varamäki, A. (2024). Planetaarinen Vaatekaappi. Gummerus. ISBN: 9789512435944

Prothero, A., Dobscha S., Thogersen et al. (2011). Sustainable Consumption: Opportunities for Consumer Research and Public Policy. American marketing association. Journal of Public Policy & Marketing, Volume 30, Issue 1, pages 31–38. <<https://doi.org/10.1509/jppm.30.1.31> > Accessed on October 3rd, 2023.

Picket-Baker, J. and Ozaki, R. (2008). Pro-environmental products: marketing influence on consumer purchase decision. The Journal of Consumer Marketing, Vol. 25 No. 5, pages 281-293. <<https://doi.org/10.1108/07363760810890516> > Accessed March 25th, 2024.

Pignatiello, G A., Martin, R J. and Hickman, R L. (2018). Decision Fatigue: A Conceptual Analysis. Journal of Health Psychology. Volume 25, Issue 1. <<https://doi.org/10.1177/1359105318763510> > Accessed on May 4th, 2024.

Planet Tracker (26 April 2023) Textiles industry out of fashion with failure to link executive pay with sustainability performance. <<https://planet-tracker.org/textiles-industry-out-of-fashion-with-failure-to-link-executive-pay-with-sustainability-performance/> > Accessed March 20th, 2024.

Planet Tracker – full report. <<https://planet-tracker.org/wp-content/uploads/2023/04/Textiles-remuneration-report.pdf> > Accessed March 20th, 2024.

Pucker, K. (August 20, 2024) Beware Fashion's Sustainability Retreat. Business of Fashion. <https://www.businessoffashion.com/opinions/sustainability/fashion-sustainability-retreat-climate-change/?utm_source=newsletter_sustainability&utm_medium=email&utm_campaign=Sustainability_230824&utm_term=6HOXJUQH7RDRLLP27FUTTTTELX4&utm_content=top_story_1_cta > Accessed on August 20th, 2024.

Quantis. (2018). Measuring fashion: insights from the environmental impact of the global apparel and footwear industries. Full report and methodological considerations. quantis-intl.com <<https://quantis-intl.com/measuring-fashion-report> > Accessed on September 22nd, 2023.

Quantis. (16.03. 2021). To fix fashion's sustainability problem, we need a little less conversation and a little more action. <<https://quantis.com/news/to-fix-fashions-sustainability-problem-we-need-a-little-less-conversation-and-a-little-more-action/> > Accessed on September 22nd, 2023.

Ragusa, A., Notarstefano, V., Svelato, A., Belloni, A., Gioacchini, G., Blondeel, C., Zucchelli, E., De Luca, C., D'Avino, S., Gulotta, A., Carnevali, O. and Giorgini, E. (2022). Raman Microspectroscopy Detection and Characterisation of Microplastics in Human Breastmilk. *Polymers*, Basel. 2022 Jul; 14(13): 2700. National Library of Medicine. <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9269371/> > Accessed on April 17th, 2024.

Remy, N., Speelman, E. and Swartz, S. (20.10.2016). Style that's sustainable: A new fast-fashion formula. McKinsey Sustainability. <<https://www.mckinsey.com/capabilities/sustainability/our-insights/style-thats-sustainable-a-new-fast-fashion-formula> > Accessed on September 4th, 2023.

Saturday Night Live (2024) Fast Fashion Ad. SNL. You Tube. <<https://youtu.be/MKTN2OiR2R8?si=L0iz8cXCqPpG077j> > Accessed on May 25th, 2024.

Science Based Targets – Driving ambitious corporate climate action. <<https://sciencebasedtargets.org> > Accessed May 19th, 2024.

Senge, Peter (2014) "Systems thinking for a Better World" Aalto University Systems Forum lecture. <<https://www.youtube.com/watch?v=0QtQqZ6Q5-o> > Accessed on March 15th, 2024.

Service Public France (February 2020). Environment. Anti-Waste Law for a Circular Economy. <<https://www.service-public.fr/particuliers/actualites/A16390?lang=en>> Accessed on April 17th, 2024.

Sitra Studies 132 – SHIFT, 2018.
<<https://www.sitra.fi/app/uploads/2018/05/sitrashiftraporttiwww.pdf>> Accessed April 27th, 2023.

Sheeran, P., and Webb, T L. (2016). The intention–behavior gap. Social and Personality Psychology Compass. Volume 10, Issue 9, 503–518.
<<https://doi.org/10.1111/spc3.12265>> Accessed on July 25th, 2023.

Sollisch, J. (June 10th, 2016). The cure for decision fatigue. Wall Street Journal.
<<https://www.wsj.com/articles/the-cure-for-decision-fatigue-1465596928>> Accessed on May 4th, 2024.

Stanford University. Behavior Design Lab. What is Behavior Design?
<<https://behaviordesign.stanford.edu/>> Accessed on May 25th, 2024.

Statista. (30.10.2023) Production volume of chemical and textile fibers worldwide from 1975 to 2022.
<<https://www.statista.com/statistics/263154/worldwide-production-volume-of-textile-fibers-since-1975/>> Accessed on November 4th, 2023.

Sugiyama, M., Wilson, C. Wiedenhofer, D., Boza-Kiss, B., Cao, T., Chatterjee, J.S., Chatterjee, S., Hara, T. et al. (2024). High with low: Harnessing the power of demand-side solutions for high wellbeing with low energy and material demand. Joule Volume 8, Issue 1, Pages 1-6.
<<https://doi.org/10.1016/j.joule.2023.12.014>> Accessed on May 21st, 2024.

Suomalainen Työ, Finnish Social Enterprise.
<<https://suomalainentyo.fi/en/services/finnish-social-enterprise/>> Accessed on May 15th, 2024.

Thomas, Maura (March 15th, 2018). To Control Your Life, Control What You Pay Attention To. Harvard Business Review. <<https://hbr.org/2018/03/to-control-your-life-control-what-you-pay-attention-to>> Accessed on May 15th, 2024.

Tonello, Matteo (January 15, 2024) ESG Performance Metrics in Executive Pay, Harvard Law School Forum on Corporate Governance. <<https://corpgov.law.harvard.edu/2024/01/15/esg-performance-metrics-in-executive-pay/>> Accessed on February 15th, 2024.

Trainer T. (2019). Remaking settlements for sustainability: the simpler way. Journal of Political Ecology; 26: 219–221. <<https://doi.org/10.2458/v26i1.22972>> Accessed on February 10th, 2024.

Trunk, U., Harding-Rolls, G. & Urbancic N., (2023). Take-back trickery: An investigation into clothing take-back schemes. Changing Markets Foundation. <<https://changingmarkets.org/wp-content/uploads/2023/07/Take-back-trickery.pdf>> Accessed on August 30th, 2023.

United Nations Climate Change: The Paris Agreement. <<https://unfccc.int/process-and-meetings/the-paris-agreement>> Accessed on September 4th, 2023.

United Nations, Academic Impact, Sustainability <<https://www.un.org/en/academic-impact/sustainability>> Accessed on January 15th, 2023.

United Nations Brundtland Commission (1987). Our Common Future. The World Commission on Environment and Development. <<http://www.un-documents.net/our-common-future.pdf>> Accessed on January 15th, 2023.

United Nations (June 1992). Sustainable Development, Agenda 21.

<<https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>>

Accessed on August 1st, 2023.

United Nations. General Assembly (September 2015). Transforming our world: the 2030 Agenda for Sustainable Development.

<<https://documents.un.org/doc/undoc/gen/n15/291/89/pdf/n1529189.pdf>>

Accessed on August 2nd, 2023.

UN Global Sustainability Development (2023). Global Sustainability Development Report 2023: Times of crisis, times of change.

<[https://sdgs.un.org/sites/default/files/2023-](https://sdgs.un.org/sites/default/files/2023-09/GSDR%202023%20Key%20Messages_0.pdf)

[09/GSDR%202023%20Key%20Messages_0.pdf](https://sdgs.un.org/sites/default/files/2023-09/GSDR%202023%20Key%20Messages_0.pdf) > Accessed on September 22nd, 2023.

UN Development of Economic and Social Affairs, Sustainable Development.

<<https://sdgs.un.org/>> Accessed on September 2nd, 2023.

Valtioneuvosto (April 15th, 2024). EU Corporate Sustainability Due Diligence Directive receives qualified majority of votes in Coreper.

<<https://valtioneuvosto.fi/en/-/1410877/eu-corporate-sustainability-due-diligence-directive-receives-qualified-majority-of-votes-in-coreper> >

Accessed on April 16th, 2024.

Van Manen, Max. (1990), Researching Lived Experience: Human Science for An Action Sensitive Pedagogy. State University of New York Press. Pgs 19, 36 and 57-58. ISBN-10 : 1629584169

Vladimirova, K. (3.3.2024). The unbearable lightness of... writing down your wardrobe. Postgrowth fashion. Substack.

<https://postgrowthfashion.substack.com/p/the-unbearable-lightness-of-writing?utm_source=post-email-

[title&publication_id=1743004&post_id=141276979&utm_campaign=email-post-](https://postgrowthfashion.substack.com/p/the-unbearable-lightness-of-writing?utm_source=post-email-title&publication_id=1743004&post_id=141276979&utm_campaign=email-post-)

[title&isFreemail=true&r=1ktq9m&triedRedirect=true&utm_medium=email](#) >

Accessed on March 3rd, 2024.

West, R. and Michie, S. (2020) A brief introduction to the COM-B Model of behaviour and the PRIME Theory of motivation.

<<https://doi.org/10.32388/WW04E6.2> > Accessed on February 10th, 2024.

White, K., Hardisty, D. and Habib, R. (July-August 2019). The Elusive Green Consumer. Harvard Business Review Magazine July-August 2019 Issue.

<<https://hbr.org/2019/07/the-elusive-green-consumer> > Accessed on April 25th, 2023.

White, K., Habib, R. and Hardisty, D. (2019). How to SHIFT Consumer Behaviours to be More Sustainable: A Literature Review and Guiding Framework. American Marketing Association. Journal of Marketing. Volume 83, Issue 3. <<https://doi.org/10.1177/0022242919825649> > Accessed on July 11th, 2023.

Wilke A. and Mata R. (2012). Cognitive Bias. The Encyclopedia of Human Behavior, Volume 1, pages 531-535. Academic Press.

<<https://doi.org/10.1016/B978-0-12-375000-6.00094-X> > Accessed on July 6th, 2024.


World Economic Forum (January 22, 2024). Panel discussion of Global Outlook. Davos Switzerland. <<https://www.c-span.org/video/?533033-1/world-economic-forum-discussion-global-outlook> > Accessed on February 1st, 2024.

Worldometer: world population in real time.

<<https://www.worldometers.info/world-population/> > Accessed on January 12th, 2024.

Wu, Tim (2016). The attention merchants: The epic struggle to get inside our heads. Knopf, Penguin Random House LLC, New York. ISBN-10 : 0385352018

Appendix II: STATE OF SISU BMC

<p>PROBLEM:</p> <ul style="list-style-type: none"> • Ecological overshoot. • Over-consumption exceeds ecological boundaries & creates anxiety in personal level. • Limited progress on sustainability goals using financial, technological and capacity efforts. • Changing consumer behavior is a huge challenge. • Changes through legislation are slow. • Change through technology are costly. 	<p>SOLUTION:</p> <ul style="list-style-type: none"> • Reducing fashion consumption w/o sacrificing self-expression. • Researching, (de)influencing, connecting and consulting. • Style-centric & sufficiency-minded action. <p>KEY RESOURCES:</p> <ul style="list-style-type: none"> • Local & global connections in the design, corporate & academic world. • Basic technology & filming equipment. • Sewing machine & craft supplies. • Small workspace. 	<p>UNIQUE VALUE PROPOSITION:</p> <ul style="list-style-type: none"> • To show the power of us individuals & our style. • To help consumers understand human behavior based on COM-B model. • To encourage sufficiency thinking & cost-effective ways to mitigate overshoot. • To promote pro-environmental behavior-change w/o sacrificing self-expression. • To create entertaining social media content & educational materials. • To do selective speaking engagements, visual & writing projects. • To raise funds for research through creative projects based on circular thinking. 	<p>(UN)FAIR ADVANTAGE:</p> <ul style="list-style-type: none"> • "Ecosystem as a boss"-mentality. • Combination of (de)influencing, design & branding. • Research based solutions. • International experience from business & educational entities. • Local & global industry connections. <p>CHANNELS:</p> <ul style="list-style-type: none"> • Social media & other social networks. • In-person & online events w. partner organizations. 	<p>CUSTOMER SEGMENTS:</p> <ul style="list-style-type: none"> • Style-focused individuals. • Pro-environmental & sufficiency-minded citizens. • Proactive entities who recognize the reality of finite resources and need for change through: <ul style="list-style-type: none"> • efficiency, • legislation & • sufficiency measures. 
<p>COST STRUCTURE:</p> <ul style="list-style-type: none"> • Project costs including technology & staffing. • Sewing & art supply costs. • Research costs. • Workspace rent. 		<p>REVENUE STREAMS:</p> <ul style="list-style-type: none"> • Consulting and speaking fees. • Behavior design presentations. • Re-designed and branded 2nd hand merchandise. • Research funding from partner organizations. 		

Initial draft for State of Sisu's Business Model Canvas (BMC). Created in cooperation with Eelis Veijalainen, a business school student in University of Turku, Finland.

Appendix III: INTERVIEW CONSENT FORM

TIEDOTE TUTKIMUKSESTA - IT'S ABOUT US: and the planet...

Pyyntö osallistua tutkimukseen

Pyydän sinua mukaan tutkimukseen, joka käsittelee muodin ja tekstiilien kuluttaja käytöstä. Haastatteluissa kartutetaan ymmärrystä kuluttaja tieto pohjasta ja kiinnostuksesta vastuulliseen muotiin, kulutus käytöksen muutokseen ja sen esteisiin.

Haluaisin sinut mukaan tutkimukseen ryhmä haastatteluun osallistujana tai asiantuntijanan roolissa. Perehdyttyäsi tähän tiedotteeseen sinulla on mahdollisuus esittää kysymyksiä tutkimuksesta, jonka jälkeen sinulta pyydetään suostumus tutkimukseen osallistumisesta.

Vapaaehtoisuus

Tutkimukseen osallistuminen on täysin vapaaehtoista.

Voit myös keskeyttää tutkimuksen koska tahansa syytä ilmoittamatta. Mikäli keskeytät tutkimuksen tai peruutat suostumuksen, sinusta keskeyttämiseen ja suostumuksen peruuttamiseen mennessä kerättyjä tietoja ja näytteitä voidaan käyttää osana tutkimusaineistoa.

Tutkimuksen tarkoitus

Tämän tutkimuksen tarkoituksena on kerätä syventävää tietoa siitä, miksi vaate ja tekstiili kuluttajan aikomuksen ja käytöksen välillä on kuilu ja minkälaiset interventio tavat voisivat tukea tämän kuilun pienentämistä.

Tutkimuksen toteuttajat

Tutkimus saattaa toimii tietopohjana tulevaisuudessa toteutettavalle kuluttajan käytöksen muutos materiaalille, mutta ei osa mitään tutkimusprojektia.

Tutkimusmenetelmät ja toimenpiteet

Tutkimukseen kuuluu kuluttajien ryhmä haastattelut, asiantuntija haastattelut, muistiinpanot omista havainnoista ja yleisistä löydöksistä alan tapahtumissa. Kuluttaja ryhmähaastattelujen osallistujalta vaaditaan 15 vuoden ikä sekä kokemus vaate ja tekstiili tuotteiden kuluttajana. Haastatteluun osallistuminen kestää noin tunnin. Asiantuntijoilta vaaditaan syvällistä tietoutta jostakin tutkittavasta osiosta ja aikaa noin tunti.

Tutkimus toteutetaan kvalitatiivisia menetelmiä käyttäen.

Kustannukset ja niiden korvaaminen

Tutkimukseen osallistuminen ei maksa mitään, eikä osallistumisesta makseta erillistä korvausta.

Tutkimustuloksista tiedottaminen

Kysymyksessä on opinnäytetyö, joka julkaistaan avoimesti Theseus-tietokannassa.

Tutkimuksen päätyminen

Myös tutkimuksen suorittaja voi keskeyttää tutkimuksen, mikäli löydökset eivät tue tutkimusta.

Tutkimuksen tietosuojaseloste: Henkilötietojen käsittely tutkimuksessa

Tässä tutkimuksessa käsitellään teitä koskevia henkilötietoja voimassa olevan tietosuojalainsäädännön (EU:n yleinen tietosuoja-astus, 679/2016, ja voimassa oleva kansallinen lainsäädäntö) mukaisesti. Seuraavassa kuvataan henkilötietojen käsittelyyn liittyvät asiat.

Tutkimuksen rekisterinpitäjä

Tässä tutkimuksessa henkilötietojen rekisterinpitäjät ovat: X Opinnäytetyön tekijä Minä, opinnäytetyön tekijänä vastaa henkilötietojen käsittelystä työn tekoajan ja hävittämisestä työn palautuksen jälkeen.

Minä opinnäytetyön tekijänä vastaan rekisteröityjen oikeuksien toteutumisesta ja heidän informoinnistaan sekä tietoturvasta.

Voitte kysyä lisätietoja henkilötietojen käsittelystä rekisterinpitäjän yhteyshenkilöltä

Rekisterinpitäjän yhteyshenkilön nimi:

Terhi Ketola-Stutch

Sähköposti: terhi@stateofsisu.com

Tutkimuksessa sinusta kerätään seuraavia henkilötietoja

Ryhmähaastattelun osallistujat: lupa suostumuslomakkeen avulla.

Haastattelut äänitetään ja muistiinpanoissa saatetaan käyttää haastateltujen etunimiä, mutta opinnäytetyössä osallistujia kuvataan geneerisesti käyttämällä sukupuolta ja ikää.

Asiantuntija haastateltavat: suullinen ja kirjallinen lupa. Opinnäytetyössä nimet ja tutkimukseen relevantti työhistoria mainitaan.

Kenelläkään ei ole sopimukseen tai lakisääteiseen tehtävään perustuvaa velvollisuutta toimittaa henkilötietoja vaan osallistuminen on täysin vapaaehtoista.

Henkilötietojen suojaperiaatteet

Sensitiivinen informaatio säilytetään käyttäjätunnuksen ja salasanan takana olevassa tiedostossa. Fyysiset henkilötietoja sisältävät paperit säilytetään lukollisessa laatikossa.

Henkilötietojen käsittelyn tarkoitus

Opinnäytetyö keskittyy käsittelemään kuluttaja käytöstä hyvin yleisellä tasolla, mutta haastattelut nauhoitetaan ja etunimet kirjataan muistiinpanoihin, jotta sisältö pysyy täsmällisenä ja todenmukaisena.

Henkilötietojen käsittelyn peruste

Henkilötietojen käsittelyn peruste on suostumus.

Tutkimuksen kesto aika (henkilötietojen käsittely aika)

Tutkimus päättyy joulukuussa 2024.

Mitä henkilötiedoille tapahtuu tutkimuksen päättyttyä?

Henkilötiedot hävitetään tutkimuksen päättymisen jälkeen.

Tietojen luovuttaminen tutkimusrekisteristä

Tietoja ei luovuteta tutkimusryhmän ulkopuolelle.

Henkilötietojen mahdollinen siirto EU:n tai ETA-alueen ulkopuolelle

Tietoja ei siirretä EU:n tai ETA-alueen ulkopuolelle.

Koska henkilötietojasi käsitellään tässä tutkimuksessa, niin olet rekisteröity tutkimuksen aikana muodostuvassa henkilörekisterissä.

Rekisteröidyillä on oikeus:

- saada informaatiota henkilötietojen käsittelystä
- tarkastaa itseänne koskevat tiedot
- oikaista tietojanne
- poistaa tietonne (esim. jos peruutatte antamanne suostumuksen)
- peruuttaa antamanne henkilötietojen käsittelyä koskeva suostumus rajoittaa tietojen käsittelyä
- rekisterinpitäjän ilmoitusvelvollisuus henkilötietojen oikaisusta, poistosta tai käsittelyn rajoittamisesta
- siirtää tietonne järjestelmästä toiseen
- sallia automaattinen päätöksenteko nimenomaisella suostumuksella
- tehdä valitus tietosuojavaltuutetun toimistoon, jos katsotte, että henkilötietoja on käsitelty tietosuojalainsäädännön vastaisesti

Tutkimuksessa kerättyjä henkilötietoja ei käytetä profilointiin tai automaattiseen päätöksentekoon

Henkilötietojen käsittely aineistoa analysoitaessa ja tutkimuksen tuloksia raportoitaessa

Sinusta kerättyä tietoa ja tutkimusaineistoa käsitellään luottamuksellisesti lainsäädännön edellyttämällä tavalla. Asiantuntija haastatteluissa ei pyritä anonymiteettiin.

Opinnäytetyössä ryhmä haastatteluun osallistujia kuvataan geneerisesti (esim. sukupuoli, ikä ja asuinmaa).

Appendix IV: GROUP INTERVIEW PARTICIPANT DETAILS

	ID	GENDER	AGE GROUP	COUNTRY OF RESIDENCE	VALUE(S) #	GROUP #
1	Person A	Female	45-54	Luxemburg / Finland	2	I
2	Person B	Female	15-18	Luxemburg / Finland	2,4	I
3	Person C	Female	15-18	Finland / USA	2,4	I
4	Person D	Male	55-65	Finland / USA	2	I
5	Person E	Male	45-54	Luxemburg / Finland	1,4	II
6	Person F	Male	45-54	Finland	4	II
7	Person G	Male	45-54	Finland	1	II
8	Person H	Male	45-54	China / Finland	1	II
9	Person I	Female	45-54	Finland	2	III
10	Person J	Female	45-54	Finland	2,4	III
11	Person K	Female	55-65	Finland	1	IV
12	Person L	Male	55-65	Finland	1	IV
13	Person M	Female	25-34	Finland	2	IV
14	Person N	Male	25-34	Finland	4	IV
15	Person O	Female	55-65	Finland / USA	1	V
16	Person P	Female	18-24	UK / Finland	1,2	V
17	Person Q	Male	35-44	UK	2	V
18	Person R	Female	45-54	Finland	2	VI
19	Person S	Male	45-54	Finland	2	VII
20	Person T	Male	over 65	Finland	1	VII

Twenty individuals were interviewed in 6 semi-structure group interviews. Due to last minute cancellation, one group ended up being a group of one.

Appendix V: BEHAVIOR TYPES BASED ON VALUES

Type 1:

- Local issues more important to me than global issues.
- Responsibility is action, not talk.
- "Let's not make a big fuss about this."
- Values: honesty, modesty, hard work, managing on one's own.

Type 2:

- World is a global place.
- My own actions can impact better future.
- Individual and consumer responsibility are important to me.
- Values: open mindedness, trust in experts.

Type 3:

- I feel guilty about irresponsible consumption.
- Sustainability issues seem difficult and take too much time/effort.
- Companies and politicians are responsible for sustainability actions, not individuals.

Type 4:

- I am aware that sustainability is important, but I don't act on it.
- My own comfort is more important than changing my ways.
- Status-based actions are important to me.
- "Someone else will take care of things."

Type 5:

- I couldn't care less about sustainability and responsible consumption.

Tyyppi 1:

- Oman elinpiirini asiat tärkeämpiä kuin globaalit asiat.
- Vastuullisuus on tekoja, ei puhetta.
- "Ei tehdä tästä nyt numeroa."
- Arvoja: rehellisyys, vaatimattomuus, työteliäisyys, itse pärjääminen.

Tyyppi 2:

- Maailma on globaali paikka.
- Omien toimieni kautta voin vaikuttaa parempaan tulevaisuuteen.
- Yksilö- ja kuluttajavastuu tärkeitä.
- Arvoja: suvaitsevaisuus, usko asiantuntijuuteen.

Tyyppi 3:

- Minulla on huono omatunto vastuuttomasta kulutuksesta.
- Vastuullisuusasiat tuntuvat vaikeilta ja vaativat liikaa aikaa/ paneutumista.
- Vastuullisuusteot ovat yritysten ja poliitikkojen vastuulla, ei yksilöiden.

Tyyppi 4:

- Olen tietoinen vastuullisuuden merkityksestä, mutta en itse toimi sen eteen.
- Mukavuudenhaluni tärkeämpää kuin tapojeni muuttaminen.
- Statushakuinen toiminta on minulle tärkeää.
- "Joku muu hoitaa."

Tyyppi 5:

- EVVK - Vastuullisuus ja vastuullinen kuluttaminen eivät kiinnosta minua ollenkaan.

Appendix VI: INTERVIEW STRUCTURE AND BASE-QUESTIONS

Start of each interview session:

- Get consent from all participants to voice record the interview for the purpose of accuracy.
- Inform group participants that the purpose of the interview is to better understand current textile and fashion consumer behavior.
- The participants are told that there are no right or wrong answers, but the aim is to get honest answers.
- The participants are informed that they will stay anonymous in the thesis.

Base-Questions for semi-structured group interviews were as follows.

The flow of conversation in each group determined the exact set of questions:

1. Are clothing and home textiles important to you? And if yes, then why?
2. Can you guesstimate how many pieces of clothing you own (not including socks or underwear)?
3. How much of your wardrobe do you actively wear?
4. Have there been changes in your life that have also changed your clothing and textiles consumption habits (such as systematic decluttering, career change, geographic move, inflation, covid)?
5. Which one of these behavior types represent you the best? (See Appendix II for options)
6. Do you buy clothes and home textiles based on need or want?
7. What do the terms “responsible or sustainable clothing or textile” mean to you?
8. Do you see a connection between climate change and consumer behavior?
9. Are responsibility and sustainability important factors in your clothing and textile purchases? Can you find enough information about it?
10. Do you look at the information provided in labels and hang tags of the garments or home textiles you purchase (such as production country, fiber content, care info and certificates)? Is that information meaningful to you?
11. Do you buy or sell 2nd hand clothing?
12. Do you mend or use mending/repair services?
13. Is the quality of clothing or home textiles important to you? How do you recognize good quality?
14. Do you ever do research on brands or their production methods before you make purchase decisions?
15. Are there any clothing or textile brands that you wouldn't buy and if so, why?
16. What do you do with your clothes and textiles when they come to the end of the road in your closet?

Appendix VII: IMAGES SHOWN IN TWO GROUP INTERVIEWS

Additionally in two of the interviews, participants were shown six images and asked: “What kind of thoughts do these photos trigger?”

After the participants viewed and commented on the images, one additional question was asked: “Would you do anything differently as a textile and fashion consumer if you had more time, money, access to information or influence?”



1 - Image Credit: Reuters



#2 - Image Credit: Reuters



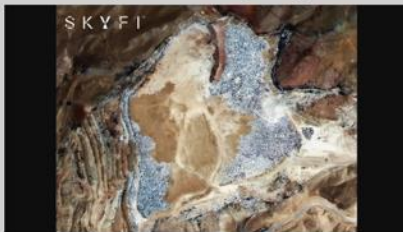
3 - Image Credit: Medium



4 - Image Credit: Getty Images



5 - Image Credit: ITW News



6 - Image Credit: SkyFi

Appendix VIII: LIST OF EVENTS ATTENDED DURING THESIS WRITING

Attending events was done for information gathering and observation purposes:

- Business of Fashion. How Can Fashion Rethink the End-of-Life of Products? February 23rd, 2023.
- LSJH and Rester textile recycling facility visit in Paimio. March 10th, 2023
- KiSu: Kierrätysmateriaalien käyttösuosveloitteet. March 28th, 2023.
- Vogue Business and Trove Sustainability Forum. April 6th, 2023.
- Haastattelu opinnäytetyöhön: Terhi – Jukka Kurttila. May 4th, 2023.
- Vogue Business Technology Forum. May 11th, 2023.
- World Circular Economy Forum 2023 Online Event. May 30th, 2023.
- Designing for Circularity - Case Examples from Finland. June 1st, 2023.
- Designing products and services for circularity. June 1st, 2023.
- SITRA: Ota haltuun päivitetty Elämäntapatesti. June 7th, 2023.
- Environmental Academy: Transparency and innovation. June 20th, 2023.
- Creative Spark. July 26th, 2023.
- Paimio Fashion Week. August 25th and 26th, 2023
- Finnish Textile & Fashion Association: EU chemical regulation training. August 30th, 2023
- Finnish Textile & Fashion Association: Sustainability network meeting and lunch. August 31st, 2023
- KiSu: Tekstiilien tuottajavastuu. September 14th, 2023.
- KiSu: Kestävää kasvua kiertotalouden liiketoimintamalleista –vinkejä ja työkaluja yritysysteistyön vauhdittamiseen. October 4th, 2023.
- Finnish Textile & Fashion Association: Metaversumi - muodin uusi ulottuvuus. October 10th, 2023
- I love me 2023 Convention. October 21st, 2023.
- Textile & Fashion Forum Helsinki, October 26th, 2023
- Circular initiative 2023. November 14th, 2023.
- Aktivistit mummot: Parasta päälle. November 14th, 2023.
- Fashion Footprint FAQs: The impact of fashion influencers. November 27th, 2023.
- Business of Fashion Voices Livestream. November 28th – 30th, 2023.
- Aalto University: Out of Fashion - Aalto LASER Community Event. November 30th, 2023.
- Mindful Clothing Consumption Webinar Series by Cosette Joyner Martinez. January 25th, February 22nd and March 28th, 2024.
- Stadin AO: Vastuullinen stailaus täydennyskoulutus. March 5th – June 4th, 2024.
- Aalto University: NewCotton/TelaValue seminar. March 21st, 2024.
- Pulp & Beyond Convention. April 11th, 2024.
- WCEF2024 side event: How sustainable is your Circular business model? Find out with LCA! April 12th, 2024.
- Tulevaisuus torstai: Planetaarinen vaatekaappi. April 25th, 2024.
- Creative Finland. Kansainvälinen kasvu ja verkostojen rakentaminen. May 15th, 2024.
- EU-vaalipaneeli: Innovoiden ja reguloiden kohti kestävää huomista. May 16th, 2024.
- Fashion x VC Funding. June 7th, 2024.

Appendix IX: RESULTS FROM FORTUM'S BEHAVIOR DESIGN PROJECT



Yhdessä Pikku jutun osallistajat ovat saaneet kevennettyä
ilmastokuormitusta jopa

1 972 261 kg

Tämä vastaa 12 975 403 ajokilometriä henkilöautolla, eli 4
634 edestakaista ajomatkaa Hangosta Utsjoelle.*

* Lähde: VTT Lipasto, Henkilöautojen päästöt keskimäärin Suomessa vuonna 2016, 152 CO₂e g/km.

Image credit: Fortum e-mail.

Appendix X: PATAGONIA - EARTH IS NOW OUR ONLY SHAREHOLDER

Earth is now our only shareholder.

If we have any hope of a thriving planet - much less a business- it is going to take all of us doing what we can with the resources we have.

This is what we can do.

By Yvon Chouinard

I never wanted to be a businessman. I started as a craftsman, making climbing gear for my friends and myself, then got into apparel. As we began to witness the extent of global warming and ecological destruction, and our own contribution to it, Patagonia committed to using our company to change the way business was done. If we could do the right thing while making enough to pay the bills, we could influence customers and other businesses, and maybe change the system along the way.

We started with our products, using materials that caused less harm to the environment. We gave away 1% of sales each year. We became a certified B Corp and a California benefit corporation, writing our values into our corporate charter so they would be preserved. More recently, in 2018, we changed the company's purpose to: We're in business to save our home planet.

While we're doing our best to address the environmental crisis, it's not enough. We needed to find a way to put more money into fighting the crisis while keeping the company's values intact.

One option was to sell Patagonia and donate all the money. But we couldn't be sure a new owner would maintain our values or keep our team of people around the world employed.

Another path was to take the company public. What a disaster that would have been. Even public companies with good intentions are under too much pressure to create short-term gain at the expense of long-term vitality and responsibility.

Truth be told, there were no good options available. So, we created our own.

Instead of "going public," you could say we're "going purpose." Instead of extracting value from nature and transforming it into wealth for investors, we'll use the wealth Patagonia creates to protect the source of all wealth.

Here's how it works: 100% of the company's voting stock transfers to the Patagonia Purpose Trust, created to protect the company's values; and 100% of the nonvoting stock had been given to the Holdfast Collective, a nonprofit dedicated to fighting the environmental crisis and defending nature. The funding will come from Patagonia: Each year, the money we make after reinvesting in the business will be distributed as a dividend to help fight the crisis.

It's been nearly 50 years since we began our experiment in responsible business, and we are just getting started. If we have any hope of a thriving planet—much less a thriving business—50 years from now, it is going to take all of us doing what we can with the resources we have. This is another way we've found to do our part.

Despite its immensity, the Earth's resources are not infinite, and it's clear we've exceeded its limits. But it's also resilient. We can save our planet if we commit to it.