"Dutch sustainable clothing consumption and the influence of materialism, fashion clothing involvement and environmental awareness"

Mayte Leinenga

S2197235

University of Twente

Supervisors: dr. Yoram Krozer & dr. Laura Franco-García

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Abstract

This research focusses on the Dutch consumer attitude towards sustainable clothing consumption. Through literature research, interviews with experts in the field of sustainable textiles consumption and a self-administered Dutch consumer survey (n=293), it was researched what the attitude of Dutch consumers towards sustainable clothing consumption is and how materialistic, fashion clothing involved and environmentally aware the Dutch consumer is. Based on literature research, expert interviews and the consumer survey, it was concluded that the Dutch consumer has an increasingly positive attitude towards sustainable clothing consumption and can be considered a moderate to high sustainable clothing consumer. Materialism, fashion clothing involvement and environmental awareness were all moderately found in the Dutch consumer sample. Finally, it was researched to what extent these three factors contribute positively or negatively to sustainable clothing consumption, which formed the basis for three hypothesises (H1 materialism will have a negative effect on sustainable clothing consumption, H2 Fashion clothing involvement will have a negative effect on sustainable clothing consumption and H3 Environmental awareness will have no effect on sustainable clothing consumption). It was concluded that both materialism and fashion clothing involvement contributed negatively to sustainable clothing consumption and environmental awareness contributed positively to sustainable clothing consumption, confirming H1 and H2, H3 was not confirmed, since environmental awareness had a positive effect on sustainable clothing consumption, which is different from the behaviour-action gap in literature where environmental awareness does not necessarily positively influence sustainable clothing consumption. This research adds to the existing literature and differentiates itself by researching specifically Dutch consumers attitude, as attitudes in consumers differ geographically. Specifically, the level of materialism and fashion clothing involvement in Dutch consumers has not been researched broadly in literature and is beneficial to understand Dutch sustainable clothing consumption behaviour.

Chapter 1. Introduction

This chapter introduces the subject of the research and the background of the subject. Further the problem statement, objective and structure of the research are introduced.

1.1 Background

The consumption of fashion has grown in recent years as the price of clothing fell, leading to fast produced, cheap clothes that are worn only a few times and then discarded (Ellen MacArthur foundation, 2017). This has led to various ethical and environmental concerns within the framework of sustainability, as will be discussed in this background.

The current industrialised, globalized fashion cycle is fast and resource-intensive: each step in the production and distribution process produces environmental harm; water and pesticide-intensive cotton production, fossil fuels (oil) used for fabric production, water and toxic dye-intensive yarns foul water, washing polyesters fouls water with microplastics and then the vast shipping from location to location and finally underutilisation of clothing and disposal of clothing (Ellen MacArthur foundation, 2017). In 2008 the impact of clothing represented 4-6% of aggregated environmental pressures from household expenditures (Reichel, Almut; Mortensen, Lars Fogh; Asquith, Mike; Bogdanovic, Jasmina, 2014). Next to that the industry has negative social implications in terms of fairness and inequality of labour (Ellen MacArthur foundation, 2017). In this research the focus is on environmental implications of the phenomenon, meaning maintaining a stable resource base by avoiding over-exploitation of renewable sources and avoiding depletion of non-renewable sources, as well as avoiding pollution and waste (Muthu, 2017).

The production and consumption of fashion clothes can be seen as unsustainable since – adapting the term 'sustainable development' as being able for present generations to meet their needs without compromising the ability of future generations to meet their needs (Brundtland commission, 1987) – resources are exploited and disposed of at a pace in which it will not be possible for future generations to produce sufficient clothing, because of the high stress on resources (textile production uses 97% virgin material, 73% of product is landfilled or incinerated) (Ellen MacArthur foundation, 2017). When using Ofstad's (Ofstad, 1994) term for sustainable consumption – meaning consumption that brings better quality of life and minimise resource use so future generations can cover their basic needs as well (Ofstad, 1994) – it becomes apparent that current consumption overgrows the basic human need for clothing and it is uncertain whether future generations will have enough resources to cover their basic needs as well.

Fast fashion as an obstacle to sustainability

The fact that clothing sales have been rising, prices of clothing are declining as well as clothing utilisation shows the challenges to be overcome to move towards sustainable clothing consumption (Ellen MacArthur foundation, 2017).

Fashion clothing itself by nature does not have to be unsustainable, since the fashion cycle tends to be longer (3 years) than the garment life cycle (1-3 years average). The problem arises with the prevailing system of fast fashion, meaning producing a new collection every 6-8 weeks with low quality items produced by a few industry leaders who profit from economies of scale (House of Commons, 2019), (Bennamar, 2008). With the speed of these collections, the items will be out of style in matter of weeks, highlighting Walker (Walker, 2007) who states fashion is unsustainable

because it is so sensitive to change. The fast fashion business model encourages consumers to consume more and faster, reflecting a problematic 'throw away attitude' in fashion, leading to a greater and faster disposal of clothing (Allwood & all, 2006), (Gardetti & Torres, 2013).

Consumer perspective

Several sustainability guides and policies have been developed, such as WRAP's 'Sustainable Clothing Guide'(Gray, 2017) and the 2016 Dutch Textile Covenant, focusing on sustainable design, sustainable clothing production and supply and recycling of fibres (Op den Brouw & Koppert, 2017). Some argue that this is ineffective (Stormezand, 2019) and some authors are sceptical, because they believe that fashion retailers prefer focussing on financial goals and innovate production rather than stop unnecessary textiles consumption and waste generation (Kozlowski, Bardecki, & Searcy, 2012), (Kraniotis, 2018), indicating slow, non-revolutionary progress and continuation of business as usual.

The consumer perspective can prove interesting, since consumer clothing consumption affects the environmental impact significantly (Gray, 2017). Literature suggests that the use phase and the disposal phase of clothing consumption account for two thirds of environmental impact of textiles (Gardetti & Torres, 2013), (Gray, 2017). This would indicate that consumers significantly influence the sustainability impact of their clothing consumption (Van de Vreede & Sevenster, 2010). Kozlowski et all agrees that consumer environmental impact is significant and often overlooked, but visible through LCA (Kozlowski, Bardecki, & Searcy, 2012).

Some experts have been focussing on consumer impact, for instance the European Environment Agency (EEA) acknowledged the sustainability gain and liability of European consumers and businesses to mitigate consumption environmental impact by changing consumption, supply chain management, new business models and handling of clothing (Reichel, Almut; Mortensen, Lars Fogh; Asquith, Mike; Bogdanovic, Jasmina, 2014). Subsequently, the Ellen MacArthur Foundation focussed on increasing clothing utilisation (Ellen MacArthur foundation, 2017). The Ministry of Housing, Spatial planning and Environment also sought to reduce environmental impact of clothing by reducing clothing consumption (Van de Vreede & Sevenster, 2010).

In Europe in general, various studies found that an emerging group of 'green' consumers (6% of Dutch consumers (Van der Wijst, 2016)) is more willing to purchase sustainably, actively sources information and expresses they find environmental protection important (ec.europa.eu, 2011), (Doane, 2001), (Cervellon, Hjerth, & Ricard, sd). So-called green consumers aim to consume sustainable products and realise the impacts of consumption (Gardetti & Torres, 2013). Some major fashion retailers took advantage of this changing mindset by introducing 'conscious' collections, CSR and transparency reports. Another question is whether this is because of true stewardship or greenwashing.

From the 1980's and 1990's on, the Netherlands entered the fast fashion system, with retailers H&M, C&A and ZARA whom produced cheap apparel collections in fast pace, from 50 weeks then to only 25 days today. Clothing prices decreased and simultaneously more of the Dutch household expenditure was spent on clothing, utilization of textiles also dropped with 50% (Demkes, 2018). These trends are similar to other European countries (Reichel, Almut; Mortensen, Lars Fogh; Asquith, Mike; Bogdanovic, Jasmina, 2014).

1.2 Problem statement

As discussed, the current fashion industry is regarded as unsustainable and will be unable to continue in this manner due to the generated waste streams and stress on resources. Sustainability initiatives and policies can be found, however, these largely focus on the fashion sector and its incumbent actors and not on the potential of the consumer itself. As mentioned, the consumer is influential over two thirds of the impact of the fashion clothing cycle through their consumption (purchasing, use and disposal), it was also mentioned that shifting to more sustainable consumption patterns is imperative to sustain the resource-base for coming generations for their clothing production. To unlock the consumer's potential sustainability gain from sustainable clothing consumption, it is needed to understand the consumer's attitude and behaviour towards the subject.

1.3 Objective

The objective of this research is to: 1. Study Dutch sustainable clothing consumption attitude and behaviour and the extent to which materialism, fashion clothing involvement and environmental awareness are represented in these consumers and 2. The influences of materialism, fashion clothing involvement and environmental awareness on sustainable clothing consumption.

The literature available about consumer behaviour and sustainability focusses on specific geographical locations, and because the influencing factors can differ per location (Gray, 2017), the results cannot be generalised for the Dutch public. The research available about the Dutch consumer's behaviour is not extensive. Next to that, the field is relatively young, and it is beneficial to further research Dutch consumer attitudes, to add to the existing literature base.

This research can furthermore be used for further research into the attitude and behaviour of (Dutch) consumers towards sustainability in fashion.

1.4 Structure of research

In this thesis firstly, the subject of the research is introduced in Chapter 1. Introduction. In this chapter the background to the problem of the thesis is formulated, next to the problem statement and the objective. Chapter 2 continues with the literature study, where relevant concepts from literature relate to the subject are described, from which three hypothesises are formed. Chapter 3 encompasses the research methodology, including research framework, research questions, conceptual framework, research method and research framework. Chapter 4 discusses the Dutch consumer attitude towards sustainable textiles consumption and their own textiles consumption behaviour. Chapter 5 continues with the extent of materialism in the Dutch consumer and the influence of materialism in the Dutch clothing consumption behaviour. Chapter 6 goes into the influence of fashion clothing involvement in the Dutch clothing consumption behaviour. Chapter 7 describes the environmental awareness level of the Dutch consumer and the influence of this awareness on pro-environmental behaviour and sustainable clothing consumption. Chapter 8 includes the conclusions of the research, in form of answering the research main question, sub-questions and hypothesises.

Chapter 2. Literature review

In this literature review the most important concepts relevant to sustainable textiles consumption are described to form a vision of relevant research on the topic, these concepts are highlighted by an underline. The sub-topics in this literature review are: the function of fashion, consumption, materialism, fashion clothing involvement, environmental awareness and sustainable consumption. Subsequently the literature review is the basis of 3 hypothesises relating to sustainable clothing consumption that were formed, which form part of the research sub questions in chapter 3.

2.1 Function of fashion

The term fashion textiles are defined as the yarns that are created in order to make fabrics to make fashion clothing in turn. Fashion textiles include yarns for fashion clothing, so interior textiles are excluded from this specific term (nyfashioncenterfabrics.com, 2019). Sustainable fashion can be defined as a philosophy that manages economic, social and environmental impacts of fashion goods. This includes sustainability in material sourcing, production, distribution, retail, consumption and disposal (Eder-Hansen, Kryger, Morris, & Sisco, 2012). To understand the function of fashion for consumers, it is needed to understand human needs, in which Maslow and Max-Neef are well-known authors.

Maslow created 'Maslow's hierarchy of needs' in the 1940's, a pyramid of motivational human needs of which basic needs including physiological, safety, love and esteem needs and growth needs, consisting of self-actualization. According to Maslow people are motivated to fulfil these needs, starting with physiological and moving up to the next needs (McLeod, 2013). In this case fashion could fit with the need of safety (to protect the human body from the elements), social needs (clothing is part of society and communication) and esteem needs (status, showing achievement through clothing).

In the 1990's Max-Neef has proposed nine basic human needs, namely: subsistence, protection, participation, idleness, creation, affection, understanding, identity and freedom (Max-Neef, 2007). The consumption of fashion goods can satisfy the human need of protection, subsistence, and as a process it can also fulfil the need of identity, creation and participation (Gardetti & Torres, 2013).

2.2 Consumption

Fashion clothing consumption is a highly complex social phenomenon. Consumption is defined as the use of goods and services to satisfy present needs. Firstly, the need is awakened in the consumer (pre-purchase stage) and then the purchase will be planned and executed (purchase stage), after the use the good is disposed (post-purchase), which together makes up the purchase process (Solomon, Gamossy, Askegaard, & Hogg, 2006). As said, consumption fulfils present needs, as the role of consumption changes according to the needs in society. Consumption of goods can fulfil various functional roles, for example that of protection, food and also expression. Consumption is not only based on the materials incurred in it, but also has a symbolic role as was also explained in the first paragraph about the function of fashion. Consumption of goods is part of social conversation, identity and social norm. Jackson explains that consumers can be locked-in unsustainable consumption patterns partly due to social norm and habit (Jackson, 2006).

Consumer behaviour in turn refers to the behaviour of the consumer during the purchase process (O'Cass, 2004). A consumption pattern in turn can be classified as the resources (energy and material wise) that are consumed by consumers in the form of commodities, goods and services (Boulanger, 2010). Currently consumption is overstepping basic needs and according to Koles et all consumption can be divided in consumption with different extents of rationality and consciousness. Consumers can via compensatory consumption of goods fulfil a perceived deficit (low self-esteem, stress, boredom), which is then compensated by the purchase of goods (Koles, Wells, & Tadajewksi, 2017), (Strähle, 2017).

When combining consumption and the function of self-realization, consumerism occurs. In the developed world consumer society is lively, consumerism is part of everyday life and is accompanied by high power of purchase, material wealth and inexpensive goods due to mass production (Strähle, 2017). Evans and Jackson add to this that consumerism can be seen as a cultural condition where the act of consumption is central. A consumerist society is characterised by high consumption of materials and therefore accelerated environmental degradation. Since consumerism does not balance human needs and use of resources, it cannot be considered sustainable (Evans & Jackson, sd). Sustainable consumption is further described in the last paragraph of this literature review.

2.3 Materialism

Particularly in developed countries materialism is an important value that characterises consumption. Materialism is defined as the importance that is attached to owning worldly possessions by people. Those who are materialistic tend to value possessions for their status or image (Solomon, Gamossy, Askegaard, & Hogg, 2006). However, not every consumer is materialistic, not every consumer is as involved in their consumption (O'Cass, 2004). Belk's (Belk, 1985) widely used definition of materialism is similar to Solomon, according to Belk materialism is defined as the importance attached to worldly possessions. When someone is highly materialistic, possessions take a central place in the persons' life and are sources of satisfaction (Belk, 1985).

In research by Fischer et all (Fischer, Cooper, Woodward, Hiller, & Goworek, 2008) respondents portrayed emotions about their clothing disposal, they did not like throwing away clothing that they particularly liked. Some participants voiced that they felt like they deserved new clothing, others also expressed fashion is important for their self-image and public image. This highlights the relationship between consumer and clothing as well as revealing materialistic tendencies (Fischer, Cooper, Woodward, Hiller, & Goworek, 2008).

It could be reasoned that environmental knowledge could decrease materialistic tendencies, however in practice this is not found. Sadacher et all (Sadachar, Feng, Karpova, & Manchiraju, 2016) found that even though consumers were environmentally knowledgeable, they still significantly desired possessions. However, environmental knowledge encourages environmentalism which in turn encourages ditto behaviour. It could not be proven that materialism was negatively related to environmental consumption behaviour (Sadachar, Feng, Karpova, & Manchiraju, 2016). Research by Hurst et all (Hurst, Dittmar, Bond, & Kasser, 2013) however, suggested materialism has a significant negative effect on environmental awareness and environmental behaviour (Hurst, Dittmar, Bond, & Kasser, 2013).

Sustainable consumption on the other hand is characterised by consuming that which will cover basic needs without unnecessary exploitation of resources, so that future generations can fulfil their basic needs as well (Ofstad, 1994). This is in contrast with materialistic consumption, which overflows basic human needs. Boulanger (Boulanger, 2010) defines sustainable consumption as consumption that allows humans to flourish, fostering well-being and quality of life, without compromising environmental quality (Boulanger, 2010). When a consumer has a very strong relationship to possessions, it can prove easy to overflow fulfilling basic needs and even to consume to serve self-image or satisfaction. Thus, materialism can be deemed as unsustainable consumption behaviour.

Therefore, it is hypothesised that:

H1: *Materialism will have a negative impact on sustainable clothing consumption*

2.4 Fashion clothing involvement

Involvement is defined as the relationship between consumer and an object. Involvement influences how individuals give meaning to objects. Involvement has been found to be highly influential on consumption behaviour. Specifically, fashion clothing involvement is seen as the extent to which the consumer sees fashion as a central part of their life (O'Cass, 2004). According to Tigert et all (Tigert, Ring, & King, 1976) fashion clothing involvement consists of five factors, namely: fashion innovativeness and time of purchase, fashion interpersonal communication, fashion interest, fashion knowledge and fashion awareness and reaction to trends (Tigert, Ring, & King, 1976).

O'Cass (O'Cass, 2004) states that involvement in fashion clothing and materialism are interlinked since fashion clothing as a possession allows for fulfilment of acquisition, happiness etc and to portray a certain image. Fashion is very suitable for portraying materialistic values, such as utility, appearance, financial value, ability to convey status, success and prestige. This highlights that fashion is very capable to portray certain images, which indicates that those with materialistic tendencies have a greater involvement in fashion clothing (O'Cass, 2004).

In research by Fischer et all (Fischer, Cooper, Woodward, Hiller, & Goworek, 2008) many of the respondents reported being influenced by fashion in different levels of their lives, showing fashion clothing involvement. The function of fashion to portray self-identity was often mentioned. Clothing acquisition was found to be heavily influenced by fashion, many respondents stated they want to look fashionable and boost their confidence. Especially teens were keen to buy cheap fast fashion. The disposal behaviour of some respondents suggested throwing away clothing regularly, it was also mentioned they would throw away clothing after a season. Some respondents were very aware of fashion trends, which encouraged them to change their clothing, they stated (Fischer, Cooper, Woodward, Hiller, & Goworek, 2008).

Higher involvement means that fashion clothing has an important position in a consumer's life and that the consumer likely spends significant amounts of time, money and interest on fashion clothing, which would likely overgrow the basic needs of sustainable consumption (Manchiraju & Damhorst, 2016). Research by Park et all (Park, Kim, & Cardona Fornay, 2006) indicated that fashion clothing involvement likely encourages impulsive buying (Park, Kim, & Cardona Fornay, 2006), which is not encouraging sustainable consumption. Research by Cohen & Van der Wijst (Cohen & Van der Wijst, 2015) indicated that those who were more keen on buying sustainable clothes were less influenced by 'fashionability' of clothing (Cohen & Van der Wijst, 2015).

Therefore, it can be hypothesised that:

H2: *Fashion clothing involvement in fashion clothes will have a negative impact on sustainable clothing consumption*

2.5 Environmental awareness

If a consumer is <u>environmentally aware</u>, he or she is aware of how his or her behaviour contributes to sustainability and environmental issues (resource depletion, climate change etc.) (Niu & Lin, 2018).

It can be reasoned that consumers that are aware of environmental issues would be more likely to consume sustainably. However, in practice a <u>behavioural gap</u> can be found between awareness of environmental and social problems associated with consumption. Consumers who state to be aware and intent to act often do not change their traditional consumption patterns (Eckardt, Belk, & Devinney, 2010). This was also found in research by Fischer et all (Fischer, Cooper, Woodward, Hiller, & Goworek, 2008), where consumers stated to intent to consume more environmentally friendly, where only one third actually changed behaviour such as buying fast fashion merchandise, washing at lower temperatures etc (Fischer, Cooper, Woodward, Hiller, & Goworek, 2008). Another British consumer survey by the Waste and Resources Action Programme in 2017 confirmed the intention-action gap again, on multiple categories consumers stated to find subjects important, however the percentage that acts towards it is always lower (wrap.org.uk, 2017).

Through her research, Brosdahl (Brosdahl, 2010) acknowledged the behavioural gap between environmental awareness of consumers and their inaction to change their consumption behaviour. Being 'green' may be more of an aspiration than an actual change in behaviour. In Brosdahl's research, environmentally concerned consumers were more likely to behave environmentally friendly. Knowledge of the impact of textiles did encourage environmental concern, which in turn encourages ditto behaviour (Brosdahl, 2010). It is important to recognize that pro-environmental behaviour, including sustainable consumption, comprises of more than only environmental awareness, it also may require environmental knowledge, motivation, sense of responsibility, positive man-nature orientation (Chekima, Igau, Wafa, & Sondoh, 2015), perceived consumer effectiveness (Peattie, 2010) and the social norm and infrastructure being focused on environmental protection (Kollmuss & Agyeman, tandfonline.com, 2002),

Therefore, it can be hypothesised that:

H3: Environmental awareness will have no impact on sustainable clothing consumption

2.6 Sustainable consumption

As mentioned earlier, sustainable consumption means consuming to fulfil basic human needs without overexploiting resources so that future generations can also meet their needs (Ofstad, 1994). Fashion clothing is in a sustainability conflict, due to its high resource-intensity and the fact that fashion clothes now move beyond the functional need and harm the environment, as well as the fact that clothing sales are rising and prises are decreasing (Ellen MacArthur foundation, 2017). Sustainable fashion consumption can be defined as the consumption of fashion goods that goes beyond meeting utilitarian needs, it may include identity making, while not compromising the ability of future generations to meet their needs (Eder-Hansen, Kryger, Morris, & Sisco, 2012). According to Peattie (Peattie, 2010) consumption should be seen as a holistic process including nature, psychology, culture, law, policy and infrastructure of societies, thus including social and physical aspects. To move to a sustainable consumption pattern, what is needed is: willingness to reduce consumption, changing to goods-to-services substitutions, reducing material and energy use of consumption behaviour and to move towards ecologically efficient producers (Peattie, 2010).

Boulanger (Boulanger, 2010) notes that the environment is degrading due to unsustainable consumption and production. Therefore, it is imperative that consumers in industrialized countries adopt sustainable consumption patterns. He mentions that policies on sustainable consumption should focus on dematerializing (reducing amount of material needed to fulfil need) and detoxification (reducing amount of toxins in materials) of the current consumption patterns. To reach sustainable consumption, the four R's: reduce, repair, reuse and recycle should be used (Boulanger, 2010). Schulz (Strähle, 2017) states that each consumer can make a change by the purchase or non-purchase of a good by using the rethink, refuse, reduce, repair and recycle principles, which overlap with Boulanger's R's of sustainable consumption (Strähle, 2017).

As the most important concepts relating to this research have been introduced as well as the formed hypothesises, these are visualised in beneath figure 1 and repeated beneath the figure.
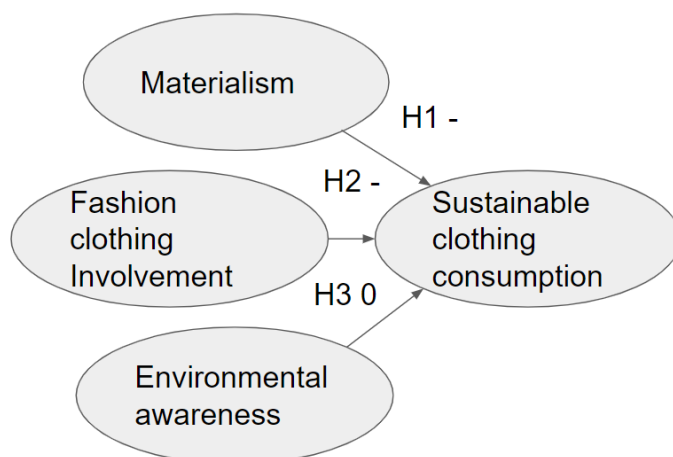

Figure 1. Visualisation of hypothesises

H1: *Materialism will have a negative impact on sustainable clothing consumption*

H2: *Fashion clothing involvement in fashion clothes will have a negative impact on sustainable clothing consumption*

H3: *Environmental awareness will have no impact on sustainable clothing consumption*

Chapter 3. Methodology

In this chapter the research methodology is specified, including the research framework, research questions, conceptual framework, research method and research strategy.

3.1 Research framework

The research framework of this thesis can be seen beneath this text in figure 2. The main concepts to research are Dutch consumer behaviour towards sustainable clothing consumption and the extent to which materialism, fashion clothing involvement and environmental awareness are found in this attitude. Secondly, the relationships between materialism, fashion clothing involvement, environmental awareness and sustainable clothing consumption. The results will then be described.
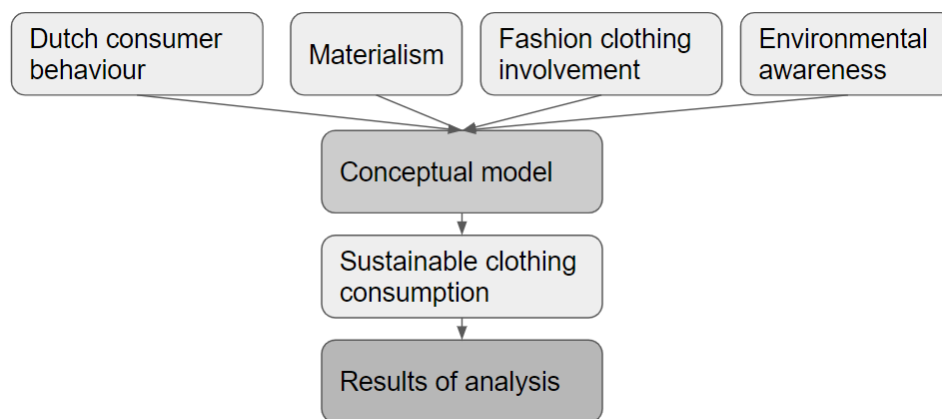
Figure 2. Research framework

3.2 Research questions

The *main research question* in this research is:

"What is the Dutch consumer attitude towards sustainable textiles consumption and how is materialism, fashion clothing involvement and environmental awareness related to this?"

The following *research sub questions* will be answered in this thesis:

Q1 How can the Dutch consumer sustainable clothing consumption attitude and behaviour be characterised?

Q2 A How is materialism represented in the Dutch consumer textiles attitude?
Q2 B Does materialism influence sustainable clothing consumption in Dutch consumers?

Q3 A How involved is the Dutch consumer in fashion clothing?
Q3 B Does fashion clothing involvement influence sustainable clothing consumption in Dutch consumers?

Q4 A How environmentally aware is the Dutch consumer?
Q4 B Does environmental awareness influence sustainable clothing consumption in Dutch consumers?

3.3 Conceptual framework

- *Materialism*
- *Fashion clothing involvement*
- *Environmental awareness*
- *Dutch consumer consumption attitude*
  Patterns, values, consumption behaviour

Sustainable clothing consumption

3.4 Research method

In table 1 beneath this text it is described how the research sub questions will be researched, what the target group and outcome per question is.

Table 1. Research method and output per sub-question

Sub-question	Research method	Output
Q1	Literature research Interviews with experts	Characterization of Dutch consumer attitude and behaviour towards sustainability in clothing consumption
Q2 A	Literature research Survey	Analysis of extent of materialism represented in Dutch consumer
Q2 B	Literature research Survey	Analysis of contribution of materialism to sustainable clothing consumption
Q3 A	Literature research Survey	Analysis of Dutch fashion clothing involvement
Q3 B	Literature research Survey	Analysis of contribution of fashion clothing involvement to sustainable clothing consumption
Q4 A	Literature research Survey	Analysis of Dutch environmental awareness level
Q4 B	Literature research Survey	Analysis of contribution of environmental awareness to sustainable clothing consumption

In the following paragraphs the used methods of field and desk research and analysis of gathered data will be further explained.

3.5 Research strategy

For this research, the main method of collecting data is through desk research in the form of literature review of available literature, such as market research, academic papers on consumption behaviour and papers on sustainable consumption.

On the other hand, field research was applied by using a survey among Dutch consumers which is suitable to give a perspective on the attitudes and factors influencing the consumer to consume as they do currently and the effect of materialism, fashion clothing involvement and environmental awareness level on sustainable consumption. Interviews with semi-structured questionnaires with sustainability experts will provide insights on potential sustainable consumption patterns and the attitude of Dutch consumers towards sustainable textiles consumption.

3.5.1 Survey

The consumer survey as part of the research will be further specified, including sample, measurement items and statistical analysis of data. An aggregated version of the survey can be found in the appendix. A summary of survey results is also found in the appendix.

3.5.1.1 Sample

Data was collected via a self-administered voluntary survey among Dutch consumer, spread using personal email, the UTwente SONA tool and Province of Fryslân pool. Response was gathered during a six-week period between May and June 2019.

To calculate the needed number of samples to form a representative sample of the Dutch population, the Slovin's formula was used, as formulated as follows: $n=N/(1+Ne^2)$

Where n stands for number of samples, N for total population and e for error rate.

The Dutch population consists of circa 17 million inhabitants, a certainty level of 95% is used and an error rate of 6%, thus the computation is as follows: n=17000000:(1+17000000 x 0,06 x 0,06) =278 samples needed (checkmarket.com, 2019). The survey gathered 293 responses, thus fulfilling the number of samples needed for representativity.

Beneath, table 2 illustrates the demographic characteristics of the sample.

Table 2. Demographics of sample n=293

Variable	Frequency	Percentage
Gender		
Male	98	33%
Female	193	66%
Age years old		
16-30	113	39%
31-44	47	16%
45-65	119	41%
65+	12	4%
Prefer not to say	2	1%
Education		
Middle school	52	18%
High school	35	12%
Bachelor's degree	129	44%
Master's degree	72	25%

In terms of gender representativity, this sample has relatively more women than presented in the Dutch population. In terms of age distribution, this sample presents relatively more respondents in the age of 16-30-year olds than the Dutch population.

3.5.1.2 Measurement items

The measurement items for materialism are deducted from literature by Belk, Dittmar et all, Manchiraju & Damhorst and Tigert et all (Belk, 1985), (Dittmar, Bond, & Hurst, 2014), (Manchiraju & Damhorst, 2016). The measurement items for fashion clothing involvement are deducted from literature by O'Cass and Tigert et all (O'Cass, 2004), (Tigert, Ring, & King, 1976). The measurement items for environmental awareness are based on the New Ecological Paradigm scale by Anderson (Anderson, 2012). The measurement items for sustainable consumption are based on research by Fischer et all and the sustainable consumption YCSCB scale (Fischer, Cooper, Woodward, Hiller, & Goworek, 2008), (Fischer, Böhme, & Geiger, 2017). Further definitions can be found in chapter 2.

The items were formed as mixed positive and negative statements (*refers to negative/reverse statement) to which the respondent, the Dutch consumer, could express the extent to which he or she agrees with the statements, based on the 5-point Likert scale (Brown, 2010) ranging from: 1. Strongly disagree, 2. Slightly disagree, 3. Neutral, 4. Slightly agree, 5. Strongly agree. An overview of used measurement items can be found in table 3 beneath this text. An aggregated version of the full survey can be found in the appendix.

Table 3. Scales and items

Scales and items
Materialism (8 items)
I usually only purchase the clothing I need*
I try to keep my life simple as far as possessions are concerned*
The possessions I own are not that important to me*
Purchasing products brings me satisfaction
I envy people who own expensive possessions, such as an expensive car, house or clothing
I see owning expensive possessions as signs of success
I have everything I really need to enjoy my life*
I would be more satisfied if I were able to purchase more products
Fashion clothing involvement (7 items)
Fashion clothes are not important to me*
I consider fashion clothes an important part of my life
I often choose fashionable clothes that reflect the latest trends
I do not feel influenced by fashion in my daily life*
I often follow trends and seasons
Because I find fashion clothes important, I purchase a lot of clothes
I do not form emotional connections to my clothes*
Environmental awareness (9 items)
Humans have the right to use the environment for their needs*
I prefer to purchase without thinking too much about the consequences of it*
Earth has limited resources and space
I am aware of the social impact of the clothing that I buy
I am aware of the environmental impact of the clothing that I buy
The balance of nature is delicate and easily disturbed
Humankind seriously abuses the natural environment
I keep on buying cheap clothes, although I know they will not last*
I do not think of environmental consequences during the purchase of new items*
Sustainable consumption (10 items)
I prefer to shop without carefully planning what I need*
I prefer to buy second hand, vintage or swap with friends/family than to purchase fast fashion clothes

Sustainability is not one of my criteria when shopping for clothes*
I do not pay attention to the materials that are used to make my clothing*
I wash my clothes at low temperatures (30-40 degrees)
I tumble dry my clothes instead of line-drying them*
I throw away broken clothes instead of repairing them/getting them repaired*
I try to wear/use my clothes as long as possible
Unwanted clothes I sell, give away to friends/family or donate to charity
I try to reuse my unwanted clothes, for example as cleaning rags

*Negative/reverse statements

3.5.1.3 Reliability analysis

The reliability of the scales materialism, fashion clothing involvement, environmental awareness and sustainable consumption were tested by using Cronbach's Alpha, as shown in table 4 beneath this text. As the Cronbach's Alpha coefficients for the scales are all above .67, the scales are considered reliable.

Table 4. Reliability analysis

Scale	Number of items	Cronbach's Alpha coefficient
Materialism	8	.751
Fashion clothing involvement	7	.857
Environmental awareness	9	.780
Sustainable clothing consumption	10	.671

<u>Analysis of data</u>

Data gathered from the consumer survey is statistically analysed with SPSS 25 software. Firstly, measurement items results were coded to 1-5 according to their value and whether it was a negative/reverse or positive statement. The means and standard deviations of the measurement items were computed, as well as that of the variables materialism, fashion clothing involvement, environmental awareness and sustainable clothing consumption as a whole. Then correlation analysis investigated the influence of the dependent variables (materialism, fashion clothing involvement and environmental awareness) on the independent variable (sustainable clothing consumption).

3.5.2 Interviews with experts

Next to literature research and the consumer survey among Dutch consumers, semi-structured qualitative interviews were conducted with experts (whom were asked for their consent) about sustainable clothing consumption. The consent form can be found in the appendix.

The aim of the interviews was to explore visions of the experts about Dutch consumer sustainable textiles attitudes, which might give different information than from the survey and literature.

Beneath this text, table 5 illustrates the experts interviewed.

Table 5. Expert interviews conducted

Expert	Response
Blackmore (Friesian circular pullover)	Physical interview
Dijk (Escape the System)	Physical interview
Forrer (Recycle Boulevard)	Physical interview
Nauta (passingbyLinda)	Physical interview
Verheul (United Wardrobe)	Phone interview
Veenhoven (Project CECE)	Physical interview
Ubachs (Unrobe)	Phone interview
Uiterwaal (Vintage Marketplace)	Skype interview

In the appendix an example of a semi-structured interview questionnaire can be found. The questionnaire may be changed or adapted according to the role of the expert and their expertise.

<u>Analysis of data</u>

Data gathered from the interviews with experts are qualitative and will be analysed as complementary data to the data from literature. The data may help form a vision of the attitudes found in Dutch consumers about sustainable clothing consumption. As the experts are active in the field of sustainable textiles consumption, they may bring different perspectives and add to the credibility of the research.

3.5.3 Ethical considerations

For this research, the ethics committee of University of Twente has been asked to assess the ethical aspects of the research through ethical review. The committee did not find any ethical concerns and approved the proposal (request number 190074).

The consumer survey is voluntary and anonymous and will be conducted online. The questions in the survey are mostly statements to which the respondent can indicate level of agreement, they will not ask highly personal or sensitive information. Next to this, data gathered from the survey will be stored in Google forms, only accessible to the researcher. Through the introduction of the survey, respondents will know the aim of the survey and what their data will be used for.

For the interviews with experts, the interviewee is informed about the aim of the research and the use of the data. Consent to use the interviewees' name and company name as a source will be asked, either in e-mail, verbally or through consent form (see the appendix). It is possible to code or not name the source, if this is desired by the interviewee. Information about the interviews conducted is stored online in Dropbox, only accessible to the researcher. Table 6. Planning

Chapter 4. Dutch sustainable clothing consumption behaviour

This chapter describes the behaviour and attitude of the Dutch consumer regarding sustainable clothing consumption. This will firstly be researched in literature, after which the opinions of interviewed experts follow and lastly, the results from the consumer survey will indicate the Dutch sustainable clothing consumption attitude. Finally, in the last paragraph key findings from the three sources are presented and combined.

4.1 Dutch consumer sustainable clothing consumption attitude and behaviour

4.1.1 Literature

The literature review included the notion of a new group of sustainable consumers, in this paragraph the focus will be on the Dutch consumer and their clothing consumption behaviour. To make the findings clear, they are investigated per step in the purchase cycle (pre-purchase, purchase, use and post-use/disposal).

Pre-purchase

The number of Dutch consumers that have a positive attitude towards sustainability is increasing, from 50% in 2016 to 59% in 2017 (gfk.com, 2017). PBL conducted a survey among Dutch consumers, they concluded that 91% of the Dutch population knows the concept of sustainability (Cohen & Van der Wijst, 2015). Further research by mvonederland (mvonederland.nl, 2017) showed that the mainstream Dutch consumer group is increasingly willing to find sustainability information and to make ditto purchases (mvonederland.nl, 2017).

Subsequently, Dutch research concluded in 2017 that three quarters of the Dutch consumers expressed they find it important that companies contribute positively to society, environment and human wellbeing. Half of Dutch consumers states they pay attention to sustainability when purchasing goods. One third is accepting of paying more for sustainable products (gfk.com, 2017).

GFK notes that there is a group (6%) of early adopters among the Dutch consumers, this group is more concerned about environmental issues, is higher educated, has a higher income, is fashion clothing involved, is more knowledgeable about eco-labels and is more open to collaborative sharing and recycling (Van der Wijst, 2016). This reflects the findings introduced in the introduction about an emerging group of conscious consumers.

These studies reflected a positive attitude of Dutch consumers towards sustainable clothing consumption and even a small group of early adopters, however other studies have indicated lower engagement. According to GFK, the awareness level of the Dutch consumer is only 46%, they can name examples of sustainable practices by companies. For the Dutch consumer, sustainability image is evoked by a general feeling about a company, it is not based upon facts about the company's sustainability practices (gfk.com, 2017). The Dutch consumer associates the words green, organic, durable, conscious, fair and environmentally-friendly with sustainable clothes. The consumer also expects sustainable clothing to be more expensive (Drijver & Broer, 2014).

Research by Milieucentraal suggests the Dutch consumer between de ages of 25 and 35 is looking for quality and durability in their clothes (47%), one fifth of respondents states they do not pay attention to this. From the respondents, 12% purchases second hand clothes, the rest does not often purchase these (Bot, Willemijn; Keuchenius, Cecilia, 2018).

According to research by Farsang et all the Dutch consumer is the least knowledgeable about eco-labels available and the least committed to using them to source sustainable clothes. The Dutch consumer is also the least likely to consume pro-environmental apparel (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014). According to research by Bot et all, from Dutch consumers aging from 25 to 35 years old, 47% state they never look for information about sustainable choices. 34% states they do not know where to find this information in daily life. When asked about which sustainability subjects the consumer would like more information on how to make a sustainable choice, interestingly also 'destuffing' (17%) and sustainably produced clothing (13%) are mentioned, though less popular than information about energy, housing and electronics (all above 20%) (Bot, Willemijn; Keuchenius, Cecilia, 2018).

Purchase

According to research by Farsang et all 2% of surveyed Dutch consumers buys clothing each week, 26% buys clothing each month, 44% shops them each six months, 23% buys them a few times a year and 5% less often than that. Compared to Sweden, UK, US and Germany the Dutch consumer less often buys weekly or monthly, but rather higher percentages buy each six months or a few times a year. Young consumers bought clothes more often as well as those in higher income groups.

Interestingly, the research found those that have a higher buying frequency, are more likely to consider environmental issues in the decision stage. Note that considering does not mean they buy sustainable clothes. From the countries, the Dutch consumer group of 41% does not consider (un)sustainable clothing ever, in the other countries this is 20%. The percentage of men that are considering sustainability of clothes is respectively lower than women. From the consumers that purchase clothing weekly, 43% does not consider environmental and social issues and 35% thinks the issues are important but too time consuming to consider during purchasing. Dutch consumers were less likely to participate in collaborative sharing of clothing compared to the other countries (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014).

ABN AMRO found among 1.411 Dutch consumers that 67% said to be willing to purchase second hand, however only if the good is about 43% cheaper than new goods. The main reason to purchase second hand items according to the respondents is that it saves money, it is not necessary to have a new product and it is better for the environment.

 54% was willing to purchase sustainable goods, for this the consumer accepts to pay up to 12% more. The reasons for purchasing sustainable goods according to the respondents is that it better for the environment, better for human welfare and animal wellbeing. Price is most important to the consumer in terms of sustainable goods, after which eco-labels, durability and environmental impact and animal wellbeing. Of those who are not open to sustainable purchasing, the main reasons include that they think it is more expensive than conventional goods, the sustainability claims are not trusted and that is too time-intensive to find about sustainable products.

The willingness towards leasing is lower (only 13%), due to consumer preferences to own the product themselves and that in total leasing is more expensive compared to purchasing (Hofstede, Henk, 2018).

Use

Research by Movinga among consumers of 20 countries among which at least 500 Dutch citizens indicated that the Dutch consumer estimates that 38% of the clothing in their wardrobe is not used, in reality Movinga found that 71% of clothing in wardrobes is not used even once a year. This means the Dutch consumer underestimates their clothing utilisation (movinga.de, 2019).

Further research by Maldini indicated that Dutch consumers consume circa 46 fashion items annually, in total each Dutch wardrobe contains 173 items, of which 123 are is active use (28% is unused). Approximately 7 items out of the 173 items is second hand (Maldini, Lorusso, Breuer, & Duncker, 2019). Maldini's clothing utilisation percentage is significantly higher than that in Movinga's research.

Maldini also qualitatively focussed on 50 Dutch consumers wardrobes. From her survey, the age group between 18 and 30 have the biggest wardrobes. Overall, women own more clothing items. The research found those with larger wardrobes were less knowledgeable about what is in it. Young women in large cities were most prone to buy second hand clothing (Maldini, Lorusso, Breuer, & Duncker, 2019).

Next to the utilisation of clothes, the washing and caring of clothes is significant to its environmental impact. The Dutch consumer mostly washes at 40˚, while one third is at 30˚. In terms of care for clothing, such as machine or line-drying of clothes and ironing, the Dutch are considered to have a relatively low carbon footprint. The Dutch use their clothing for circa 4 years, which is average between the European countries (Gray, 2017).

Research by Milieucentraal suggests that the Dutch consumer has the intention to use their clothing for a long period of time (78%) as well as giving it away to others (61%), repairing is somewhat less popular (38%). The respondents indicate they know how to utilize clothing for a long time (66%), giving it away to others (81%), repairing is again less well-known (45%). About 80% of the age group buys and sells products online, less use is made of sharing platforms (Bot, Willemijn; Keuchenius, Cecilia, 2018).

Post-use/disposal

According to research by Farsang et all the Dutch consumer can be considered average in terms of attitude to recycling of textiles. They do not regard it as a large hassle or express disinterest above average means. Those with higher buying frequencies showed lower interest and regard recycling as a hassle. Dutch consumers have experience with passing down unwanted clothes on to family or friends, donated to charities or resell shops, using unwanted clothing as cleaning rags or swapped unwanted clothes.

The reasons for disposal among the Dutch consumer include that in the case of recycling clothing is not wasted (75%, which is above average), it did not fit them (69%), it was damaged (56%), to help people (49%) or they were bored with it (38%) (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014).

40 clothing items are disposed annually per Dutch person, of which 24 will be incinerated due to non-textile materials which cannot be recycled easily (Maldini, Lorusso, Breuer, & Duncker, 2019). Research by the European Environment Agency in 2017 found that Dutch consumers were estimated to have 4,2 kilos of residual textile waste per inhabitant (Gray, 2017).

Maldini found that 70% of Dutch container donated garments was suitable for reuse, 26% was not suitable for reuse (Maldini, Duncker, Bregman, & Duscha, 2017). Forrer, active in selecting reusable textile from the textiles department of the Recycle Boulevard stated that about 20% can be resold, 70% is not suitable for resale. These numbers conflict but can also be due to location of the recycle bins. Maldini mentions that textile recycling workers state that the quality of the donated garments is decreasing (Forrer did not mention this, but that the quality generally is quite low with many fast fashion items, note also that their percentage of clothes suitable for resale is low compared to Maldini's case), which also decreases economic interest in the recycled textiles. According to Maldini about half of textiles is disposed of through household waste.

4.1.2 Interviews with experts

Now that the Dutch consumer sustainable clothing consumption attitude was characterized in the previous section, experts in the field of different fields that deal with sustainability in clothing have been interviewed to find their vision of the Dutch consumer attitude towards sustainability in clothing. In the appendix, the interview transcripts of the interviews can be found.

Some mutual opinions and findings were found between different interviewees, which are categorized and described below.

Dutch consumer attitude towards sustainability increases

Veenhoven (Project CeCe) believes the Dutch consumer is at a tipping point of acting towards sustainability. She notes sustainability is a hot topic and even seen as symbol of status to higher educated consumers, the image of boring eco fashion is fading out. Veenhoven notes that the Dutch consumer is becoming more aware through Dutch television programmes about unsustainability in clothes. This is when consumer reaches out to the platform to source more information (Veenhoven, 2019). Dijk (Escape the System) also mentions that she has concerned customers come to her, she then shares her knowledge and information about sustainable options (Dijk, 2019).

Nauta believes consumers are becoming more open towards sustainable clothing (Nauta, 2019). Ubachs (Unrobe) states that sustainable fashion remains to be a niche but is hopeful that it will become more en masse and that the Dutch consumer is ready for it (Ubachs, 2019). Blackmore believes the current generation and future generation will be more open to sustainability in clothing, as they have very easy access to information and can make informed and conscious choices. She thinks they are also more acceptive of sharing, lending or leasing products (Blackmore, 2019).

Forrer sees that among young adults the awareness grows and thus it is more acceptable to buy and wear second hand and vintage clothing (Forrer, 2019). Ubachs also mentions that mainly the millennial consumer is concerned, the elders are less interested, according to him (Ubachs, 2019).

Improved image of sustainable clothing and second hand/vintage clothes

In the first paragraph, Veenhoven (Project CeCe) says that the old-fashioned image of sustainable clothing is fading out (Veenhoven, 2019). This may be the case for sustainable produced clothes, however some still view second hand clothes as unhygienic and shabby.

Nauta (PassingbyLinda) states that some customers still have the that the recycle shop is unhygienic, but when she finds clothing items from there, customers are generally surprised and happy. They could not image they would find that there themselves. Nauta believes consumers are becoming

more open towards sustainable clothing. Although she also believes sustainable clothing stills has an old-fashioned image (Nauta, 2019).

Uiterwaal (Vintage Marketplace Facebook group) states to have experienced a paradigm shift in the way of thinking about used items and mentions it has become more common ground to purchase used products, such as clothing. The image has improved largely, and many societal groups now engage in purchasing second hand. This is also partially thanks to modern presentation and styling in the online market (Uiterwaal, 2019).

According to Forrer (Recycle Boulevard) the selection of donated clothes that are resold in the store allows people to be receptive for second hand clothes, since those that are resold are clean and not broken. Consumers are amazed by what is available and that it no longer matches the old fashion image of shabby second-hand clothes. This coincides with the observations of Uiterwaal.

Verheul (United Wardrobe), like Uiterwaal mentions that first consumers were hesitant about buying second hand clothing, they thought it would be not hygienical and would be a lot of trouble. The image of second-hand clothing has changed dramatically. Young women sell and buy cheap used apparel, price is an important factor why the app is so popular (Verheul, 2019). Uiterwaal complements this statement and mentions that the vintage market is growing rapidly, consumers purchase vintage clothing per kilo, which allows for cheap prices (Uiterwaal, 2019).

Apps/websites

The use of apps and websites where sustainability information can be found as well as selling and buying second hand or vintage clothes, has become more popular.

According to Verheul, cofounder of second-hand clothes app United Wardrobe, 80% of the Dutch young females aging from 16 to 24 years old has an account on the app. This would indicate that a considerable part of younger female Dutch consumer is actively looking for second hand options or is trying to sell their unwanted clothing through apps such as this one. Verheul believes this is a large impact, since these women are not purchasing directly from H&M, ZARA, etcetera (Verheul, 2019). It should be noted however that mainly cheap fast fashion items are resold there, which can be argued not to be sustainable, even if reused by other consumers.

Forrer (Recycle Boulevard) mentions that people clean out their closets and get rid of the pieces they do not like anymore, they may sell it through apps and websites and the lesser pieces are donated to the recycle store. Forrer notices that her neighbours with children are now buying second hand branded clothing, because this is cheaper for them, more qualitative and part of the value can be reclaimed through selling (Forrer, 2019).

There is also some critique on the apps, however, Uiterwaal thinks this does not make the consumer conscious about their behaviour. It allows consumers to purchase clothing and resell when they want to earn back their money for a new clothing item (Uiterwaal, 2019). Nauta is also sceptical, since according to her it is ambiguous to call all second-hand clothing sustainable, although if the quality is low and produced by fast fashion retailers, the sustainability potential is questionable (Nauta, 2019). Veenhoven (Project CeCe) is not a fan of wardrobe management, since she states that one consumers clean their closets, they immediately dump the clothes they do not desire anymore. She also believes in some time they refill their closet again, because they feel restricted if they keep only a few items in their wardrobe (Veenhoven, 2019).

Sceptic attitude

Some other experts are more sceptical about the Dutch consumer attitude towards sustainable clothes. Ubachs notes that more and more is published about sustainability in clothing, but knowledge is still lacking in the industry. According to Ubachs society often prefers to not see the impact. Ubachs also mentioned the impacts from revealing documentaries about the fashion industry. He believes that the public lacks knowledge, perhaps they are open to consuming sustainably, but simply do not know how (Ubachs, 2019).

Uiterwaal too is sceptic about the engagement of consumers with sustainability. He thinks only a small percentage is concerned and wants to do something about it, the general public is not concerned with sustainability in clothing. He states perhaps they are not aware or do not wish to be aware about environmental issues related to clothing consumption. He says the current time is against sustainability initiatives, he claims that people want new things, always. He states this is reinforced by the active role of social media in showing new items in rapid pace (Uiterwaal, 2019).

Dijk believes it is very hard to change the consumer attitude. She believes every consumer is stuck in the current system and that you need time and money to make a change, which makes it harder. She also suggests it can take up about 15 years to make a personal change in behaviour. Even the students that she teaches drawing in a fashion course, remain buying from unsustainable brands even though they have knowledge about this. As an explanation why consumers are not acting massively, she believes humans cannot oversee the impact of their behaviour on the environment. She also argues that consumers may become apathic, due to misleading information coming from the fashion industry, causing distrust (Dijk, 2019). Blackmore mentions that it takes two generations of time in order to change to sustainable behaviour and believes that Dutch consumers have lost their pride in producing clothing products, because they historically desired exotic designs and moved production to other (cheaper labour) countries (Blackmore, 2019).

Nauta thinks many consumers are not necessarily concerned, and can note a difference between consumers in Amsterdam whom are more concerned about ecolabelling, material and source and Friesian consumers who showed less interest in these aspects. She observed this during her work in clothing stores. She believes many consumers prefer safety, something they know (Nauta, 2019).

Clothes

Consumption of clothes is the main subject of this research. Some experts stand close to the consumer and their clothing consumption. Nauta (PassingbyLinda) helps consumers regarding their wardrobe and outfits. Nauta says that many consumers she meets buy one piece of clothing each time and in the end they cannot see that piece in their wardrobe anymore, since there are so many (Nauta, 2019). The fact that consumers reach out to Nauta to help compose outfits shows that consumers put importance to clothing beyond utilitarian needs. Blackmore mentions that Dutch consumers do not focus on quality of clothes (different from France and Germany), they accept it if a cheap garment becomes waste (Blackmore, 2019).

Forrer (Recycle Boulevard) is active in selecting textiles that may be reused and resold. According to her a large amount of the donated clothing is worn out and of low quality, with pieces from H&M, ZARA and Primark, although more expensive designer items are also donated. Most of the donated clothes are women's clothes. Forrer does not mention a specific change in content compared to a

few years ago. A boom in donations is found after certain holidays, such as Kings day or Christmas, then people 'dump' all their unwanted clothes to the recycle store. This can be troublesome because of this group of donations about 5% is reusable, the rest is trash.

On average 10-20% of the donated items can be resold, these items are clean, whole and not worn out. The rest goes in yellow bags, of which part can be reused as cleaning rags or goes abroad and another part will be incinerated. It seems that only a small part of donations is still suitable for resale, according to Forrer the percentage could go up, but that it may hurt the new regained image of second hand (Forrer, 2019).

Price constraint

Price is often mentioned as one of the (conceived) constraints why the Dutch consumer would not be able to purchase sustainably, however the interviews also highlighted sustainable options that are very economical and thrifty, such as second hand and vintage clothes in the recycle store or through United Wardrobe. These were also mentioned as reasons why to purchase second hand or vintage.

Veenhoven (Project CeCe) explains that she sees a trend where Dutch consumers express they care about sustainability, the will is there, however, many excuses are made not to act. One popular misconception is that consumers think sustainable clothing is always expensive. When they visit the Project Cece website and see some expensive items, they tend to only see this and look no further. In reality there is a range of different price ranges. The website aims to help consumers by enabling for easy searching and selecting on price. Veenhoven notes that sometimes some items are more expensive, but this could be because the brands only produce in small collections or because the brand makes designer clothing. Sometimes consumers are not satisfied with offered styles of garments, however it is possible to use the website to find a sustainable alternative for clothing offered by non-sustainable brands, via image search and comparison (Veenhoven, 2019).

Dijk (Escape the System) does believe price is a constraint for consumers with lower incomes as well as that it should be so that sustainable products are not more expensive than environment-harming products. Dijk herself often faces non-understanding from consumers about the prices of the garments she creates. People often think her hand-made garments are expensive (90 euros for a hand-made jumpsuit for example) and are looking for excuses not to have to buy it. Some are even critical about where she sources her materials. Dijk explains her price set up and visualises this with a price tag, showing how much labour and material costs are invested (Dijk, 2019).

Nauta (PassingbyLinda) helps consumers to create outfits that suit them best. This may also include the purchase of new items that complement the created outfits. Nauta explains that a budget given by the client can be hard to work with, for example they want to only pay 25 euros for a trouser, not 50 euros, which can be problematic if quality and sustainability are the criterion. This stresses again how consumers find price and budget an important criterion for clothing and the belief that sustainable clothing is a more expensive option (Nauta, 2019).

Uiterwaal also notes the power of the consumer to buy what they desire for their money. He mentions that fashion retailers such as H&M are doing good business currently, which means consumers can either choose to buy 2 t-shirts for a 100 euros or 10, the consumer is powerful over what they can buy for their money (Uiterwaal, 2019). Ubachs notes the importance of price as well as that it should not be very different from traditional way (Ubachs, 2019).

4.1.3 Consumer survey

The previous section featured the mutual findings found in expert interviews about Dutch sustainable clothing consumption attitude. The Dutch consumer survey (n=293) tested the Dutch consumer sustainable clothing consumption attitude by testing several sustainable clothing consumption items.

Beneath this text, table 7 shows the mean and standard deviation results for the sustainable clothing consumption variable and the 10 sustainable clothing consumption measurement items from the consumer survey, in a descending ranking. Beneath the table, the results from the consumer survey are described.

Table 6. Descriptive statistics for sustainable clothing consumption items (n=293)

	Mean	SD
Sustainable clothing consumption variable	3,76	,60
I wash my clothes at low temperatures (30-40 degrees)	4,60	,77
Unwanted clothes I sell, give away to friends/family or donate to charity	4,48	,94
I try to wear/use my clothes as long as possible	4,48	,77
I tumble dry my clothes instead of line-drying them*	4,06	1,27
I prefer to shop without carefully planning what I need*	3,74	1,31
I try to reuse my unwanted clothes, for example as cleaning rags	3,61	1,35
I do not pay attention to the materials that are used to make my clothing*	3,57	1,29
Sustainability is not one of my criteria when shopping for clothes*	3,13	1,29
I throw away broken clothes instead of repairing them/getting them repaired*	3,07	1,32
I prefer to buy second hand, vintage or swap with friends/family than to purchase fast fashion clothes	2,81	1,50

*Negative/reverse scored items   minimum score=1, maximum score=5

As can be seen in the table, the mean of the sustainable clothing consumption variable is 3,76 with a standard deviation of ,60. The highest scoring item is "I wash my clothes at low temperatures (30-40 degrees)" (mean=4,6), which could point to a sustainable clothing washing pattern. Following notably high scores were for "Unwanted clothes I sell, give away to friends/family or donate to charity" and "I try to wear/use my clothes as long as possible" (mean for both= 4,48), the former reflects familiarity with donation of unused clothes, the latter may reflect a sustainable clothing utilisation in the sample. The lowest scoring item is "I prefer to buy second hand, vintage or swap with friends/family than to purchase fast fashion items (mean= 2,81), which indicates slightly above neutral preference of second hand, vintage and swapping clothes. It can be noted generally that the measurement items in this scale were scored all above 2,80, which indicates a moderate to high sustainable clothing consumption attitude in the sample.

4.1.4 Key findings

Now that literature, expert interviews, and the consumer survey have been used to research the Dutch sustainable clothing consumption behaviour and attitude, the key findings are represented in table 8 below, allowing for comparison.

Table 7. Key findings from literature, expert interviews and survey

Dutch sustainable clothing consumption behaviour		
Literature	**Expert interviews**	**Survey**
Positive Dutch consumer attitude towards sustainability (59%) and a consumer group of early adopters, 6% of Dutch consumers.	Dutch consumer attitude towards sustainability in fashion increases, although there is a sceptic view of general Dutch consumer attitude, consumers may not be so concerned with sustainability or do not want to be, possibly due to lack of knowledge/information.	The mean of the variable sustainable clothing consumption in the sample is 3,76 with a standard deviation of ,60, all measurement items scored above 2,8, which indicates moderate to high sustainable clothing consumption representation in the sample.
Dutch consumer knows concept of sustainability (91%), other research suggests that the Dutch consumer is least knowledgeable about ecolabels and least committed to purchase sustainably.	General image that only a small group of Dutch consumers is concerned with sustainability in clothes.	It was not tested whether they know the exact concept of sustainability.
Although 41% of Dutch consumers does not consider sustainability in purchasing, the Dutch consumer is increasingly willing to find sustainability information. 54% of Dutch consumers is willing to purchase sustainable goods, even for a premium.	In practice the price constraint of sustainable clothes is given as reason to not purchase sustainable clothes.	The sample suggests that the consumer moderately considers sustainability in purchasing, with a mean of 3,13, which is slightly more than literature suggests. It was not tested whether the consumers were more willing to find information or willing to pay more.
Dutch consumer expects sustainable clothes to be more expensive.	Price is one of the most present (perceived) constraints to purchase sustainably, sustainable clothes are perceived as being expensive, despite availability of economical options.	Not tested in survey.
Dutch consumer less likely to participate in collaborative sharing and leasing.	The use of apps and websites to buy and sell second hand or vintage clothes has become more popular, also because of economical prices of these items.	Not tested in survey.
Purchase of second-hand clothes is accepted, as long as it is cheaper than new clothes.	There is an improved image of sustainable clothes, second hand clothes and vintage clothes, it has become more accepted.	The item that scored the lowest included the preference to purchase second hand, vintage or swap with family/friends over the purchase of fast fashion items (M=2,81), which

		presents a moderate attitude to second hand/vintage clothes.
Dutch clothing utilisation is underestimated although average.	Dutch consumers do not have oversight of what clothes they own anymore.	Not tested in survey.
Low carbon footprint in the Dutch washing/caring process of clothes.	Not tested in interview.	The highest scoring item includes washing at low temperatures (30-40 degrees) (M=4,6), next to this, line-drying instead of tumble-drying clothing scored a mean of 4,06, which indicates a sustainable washing and caring pattern in the consumers in the sample.
Intention to use clothes for a long period, giving away or reselling.	Not tested in interview.	Survey results suggested the item that included the aim to use/wear clothes as long as possible scored a mean of 4,48. The consumers in the sample were familiar with donating unwanted clothes to friends/family or charity (M=4,48).
Average Dutch recycling attitude, Dutch consumer on average disposes 40 clothing items annually, 4,2 kilos of residual textile waste, of which 20%-70% can be reused.	Quality of donated clothes to recycle store is very low, only 20% can be resold.	Not tested in survey.

Above table highlights the key findings from literature, the interviews with experts and the consumer survey. Literature suggested the Dutch consumer attitude towards sustainability in fashion is positive, as did the interviews with experts carefully, though it appeared this concerned only a small group of consumers. The survey sample showed a moderate to high mean of the sustainable consumption variable (M=3,76), with many items that were scored high. According to literature Dutch consumers are moderately concerned with sustainability in purchasing, expert interviews confirmed this. The survey found a slightly higher consideration of sustainability in purchasing (self-perceived). The Dutch consumer expects sustainable clothes to be more expensive and some consumers are willing to pay more according to literature, though in practice the price constraint is though. The Dutch consumer is less likely to participate in collaborative sharing, but expert interviews showed that the use of apps and websites that concern sustainable fashion options are rising in popularity. Second hand clothing has become more accepted, this became apparent in literature as well as expert interviews. In the consumer survey however, second hand/vintage and swapping clothes was the lowest scoring item. Literature and expert interviews suggest Dutch consumers are unaware of the number of clothes in their wardrobes. Both literature and the consumer survey showed that Dutch consumers show sustainable behaviour in their washing and caring for clothes pattern, as well as the intention to use clothing as long as possible. Literature and the survey also highlighted that Dutch consumers are familiar with donating unwanted clothes to charity or friends/family.

Chapter 5. Materialism

The previous chapter dealt with the Dutch sustainable clothing consumption attitude. This chapter now continues with the degree of materialism that is found in the Dutch consumer according to existing consumer studies and the consumer survey that was carried out for this research. In the last paragraph findings from both sources will be described and compared.

5.1 Degree of materialism in Dutch consumer textiles consumption

5.1.1 Literature

Several studies have investigated materialism in Dutch consumers and suggested categorizations of Dutch consumer groups. According to one study a significant part of the Dutch consumers knows the concept of sustainability, the groups who do were categorized as postmaterialists, cosmopolitans and self-developers. The post materialistic groups tended to put the responsibility for sustainability in their own hands. The group that puts the responsibility for sustainability in government's hands tends to be sober, non-engaged and not environmentally aware. There is also a group of post materialists and cosmopolitans who want to be involved in government policy on sustainability (Cohen, Giulietta; Van der Wijst, Lianne, 2015). This suggests that the materialistic Dutch consumers tended to be less engaged in sustainability and less environmentally-aware.

The research suggested 27% of the young consumers fits into the group of world citizens, meaning they spent more money on clothing and thus can impact sustainability relatively more. It is estimated that they already pay more attention to sustainability than the average consumer. From this group, 51% worries about the environment. From the societally engaged group 63% worries about the environment (Cohen, Giulietta; Van der Wijst, Lianne, 2015).

GfK conducted a small-scale qualitative research with 13 Dutch consumers to test their attitude towards sustainability and categorized between materialistic and post materialistic. The groups that presented more materialism and less orientation to sustainability, includes dreamers, settled ones and homely ones, they represent 38% of the sample. Another 38% is considered post-materialistic and more oriented to sustainability and consists of the world citizens, the societally engaged and the dutiful ones (Drijver & Broer, 2014).

Previous referred studies focussed on consumer categorization based on materialism and post materialism. RIVM conducted research in the attitude of Dutch consumers towards sustainability by examining the environment-economy dilemma. When asked what the Dutch consumer finds more important in this dilemma, 71% choses the environment. When asked whose responsibility it is to protect the environment, 19% names the national government and 18% mentions the citizens (Beckers, T. A. M.; Harkink, E.W.F.P.M; Van Ingen, E. J.; Lampert, M. A.; Van der Lelij, B.; Van Ossenbruggen, R., 2004).

5.1.2 Consumer survey

Now that the degree of materialism in the Dutch consumer was researched in literature, the consumer survey was used to test the attitude in practice. Beneath this text, table 9 shows the mean and standard deviation results for the materialism variable and the 8 materialism measurement items from the consumer survey, in a descending ranking. The results are discussed beneath the table.

Table 8. Descriptive statistics for materialism items (n=293)

	Mean	SD
Materialism variable	2,44	,73
The possessions I own are not that important to me*	3,36	1,18
Purchasing products brings me satisfaction	3,20	1,15
I try to keep my life simple as far as possessions are concerned*	2,65	1,25
I usually only purchase the clothing I need*	2,40	1,38
I see owning expensive possessions as signs of success	2,21	1,30
I would be more satisfied if I were able to purchase more products	2,18	1,30
I envy people who own expensive possessions, such as an expensive car, house or clothing	1,90	1,13
I have everything I really need to enjoy my life*	1,64	,91

*negative/reverse scored items   minimum score=1, maximum score=5

As can be seen in table 9, the mean of the materialism variable is 2,44 with a standard deviation of ,73, which indicates a moderate representation of materialism in the sample. All items scored higher than 1,6. The highest scoring materialism item, is "The possessions I own are not that important to me"* (M=3,36), which indicates that the sample generally did not agree that their possessions were not that important to them. The lowest scoring item is "I have everything I really need to enjoy my life"* (M=1,64), which again shows that the sample is generally not agreeing that they have everything they require in life.

5.1.3 Key findings

Both literature and the consumer survey were used to research the degree of materialism in the Dutch consumer, key findings from both sources are listed in table 10 below, after which beneath the table they are compared.

Table 9. Key findings from literature and survey

Materialism level in Dutch consumers	
Literature	**Survey**
Dutch post materialistic consumer more likely to feel responsible for sustainability than non-engaged consumer.	Not tested in survey.
27% of Dutch consumer is world citizen and spends more money on clothing, and estimated to pay more attention to sustainability, from the 27% Dutch world citizens 51% worries about the environment.	Not tested in survey.
Possibly 38% of Dutch consumers is materialistic, another 38% is post-materialistic.	Overall, the mean of the materialism is 2,44 with a standard deviation of ,73. This

	represents a moderate materialism attitude in the consumer sample. Possessions were considered important (M=3,36) as well as satisfactory to purchase them (M=3,2), which indicates materialistic tendencies.
71% of Dutch consumer finds environment more important than economy.	Not tested in survey.

Above table 10 highlights key findings from literature and consumer survey. Literature suggested that the Dutch consumers are divided in terms of materialism, 38% may be materialistic and another 38% post-materialistic and 71% would find environment more important than economy. The consumer survey sample found a mean of 2,44 for the materialism variable with a standard deviation of ,73. Both possessions were seen as important and the purchase satisfactory, which indicates that the consumer sample represented materialism moderately. Both literature and the consumer survey suggested moderate materialistic tendencies in the Dutch consumer.

5.2 Relationship between materialism and unsustainable textiles consumption

5.2.1 Literature

The previous paragraphs focussed on the degree of materialism in the Dutch consumer, this paragraph focusses on the influence of materialism on sustainable clothing consumption.

Several scientists have expressed their concern regarding overconsumption of material goods that threaten the wellbeing of Earth's ecosystem through depletion of resources and pollution. The consumption overflows the earth's ability to replenish the natural resources incurred in the consumption. Materialistic choices are unconcerned or even hostile to the natural environment. Materialistic values have conflicted with concerns for the wider world as well as interest in environmental issues. Australians with materialistic values expressed negative attitudes towards the environment and low amount of pro-environmental behaviours. An American study yielded the same results, those with materialistic tendencies were less likely to engage in pro-environmental behaviours such as buying second hand instead of new and scored a lower expression of environmental awareness (Kasser, 2002). This indicates that those with materialistic tendencies are more likely to engage in unsustainable consumption. Research by Hurst et all suggested materialism has a significant negative effect on environmental awareness and environmental behaviour (Hurst, Dittmar, Bond, & Kasser, 2013)

Yeniaras & Akkemik (Yeniaras & Akkemik, 2016) found a moderate relationship between consumption and materialism and fashion consumption. Materialism did have a positive effect on fashion consciousness (Yeniaras & Akkemik, 2016). As mentioned in the literature review, Sadacher et all (Sadachar, Feng, Karpova, & Manchiraju, 2016) in their research could not prove that materialism was negatively related to environmental consumption behaviour (Sadachar, Feng, Karpova, & Manchiraju, 2016). The assumption that materialistic and fashion involved consumer purchases more clothing, could not be proven in research by Farsang et all (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014). It may be so that the materialistic consumer does not necessarily spend more on clothing, but buys more cheaper items however (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014).

Research by Ergen et all (Ergen, Baykan, & Turan, 2012) found that materialism and environmental knowledge both positively contributed to environmental consciousness among Turkish high school students (Ergen, Baykan, & Turan, 2012). Interestingly, research by Farsang et all (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014) found those consumers that have a higher buying frequency (and could be seen as more materialistic), are more likely to consider environmental issues in the decision stage. This could be because they are more often in the purchase decision stage (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014).

5.2.2 Consumer survey

Correlation analysis was used in order to compute the correlation between the materialism results and sustainable consumption results from the consumer survey. A significant negative correlation between materialism and sustainable consumption (r=-.475) was found in the consumer survey.

This negative correlation indicates that those consumer in the sample that had materialistic tendencies score lower on the sustainable consumption scale. This shows in this sample there was a significant negative influence of materialism on sustainable consumption.

5.2.3 Key findings

The relationship between materialism and sustainable consumption was researched in literature and in the consumer survey, key findings from both are listed in table 11 below.

Table 106. Key findings from literature and survey

Relationship between materialism and sustainable clothing consumption	
Literature	**Survey**
Materialistic values can negatively influence pro-environmental behaviour and environmental awareness, although others could not prove that materialism is related to unsustainable consumption.	The consumer sample proved that materialism is negatively correlated to sustainable clothing consumption (r=-,475).
A materialistic or fashion clothing involved consumer does not necessarily spend more on clothes, but may purchase more items for the same amount of money.	Not tested in the survey.
Materialism has in some studies been found to positively influence sustainable consumption, since it may be so that those that purchase more often, also reflect more often on sustainability.	In the sample, materialism negatively influenced sustainable clothing consumption and did not test whether those that purchase more often, also face more sustainability consideration in the purchase process.

Above table reflects the key findings from literature and survey. Most notably, literature was divided about the relationship between materialism and sustainable clothing consumption, some sources indicated a negative relationship, some could not prove the relationship, where others suggested a positive relationship. The consumer survey sample found materialism significantly negatively correlated to sustainable clothing consumption, with a correlation of -,475, complementing some literature research.

Chapter 6. Fashion clothing involvement

The previous chapter focussed on the materialism extent in the Dutch consumer and the relationship between materialism and sustainable clothing consumption. This chapter focusses on fashion clothing involvement and how involved the Dutch consumer is in fashion clothes according to literature and the consumer survey. Findings from both sources will be compared. Then the influence of fashion clothing involvement on sustainable clothing consumption will be researched in literature and the consumer survey and finally also the findings from both sources will be compared.

6.1 Fashion clothing involvement in the Dutch consumer

6.1.1 Literature

Research by Farsang et all (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014) indicated that compared to Germany, US, UK and Sweden, the Dutch consumer is less influenced by the function of fashion and individuality of clothing. In the Netherlands clothing may respectively be less important for showing status or position (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014).

Von Maltzahn (Von Maltzahn, 2013) complements these findings, he states that the Dutch consumer is only moderately concerned with fashion, he states that the Dutch consumer prefers comfort, durability and flexibility. This is because the Dutch consumer rides their bicycle, goes to work and later to a party perhaps, for which they prefer one set of clothes that works for all occasions. This is different from some other European countries, where consumers change clothes twice a day. When looking into what value the Dutch consumer identify with the most, either 'looking good' or 'being in fashion', they value the former more than the latter. The brands also do not produce clothes especially made to the wishes of the Dutch market. The Dutch style combines stylish and casual, sober and expressive, luxurious and basic, leading to an uncomplicated style. This may originate in the value that Dutch citizens prefer to be 'normal', individualistic and pragmatic (Von Maltzahn, 2013).

Research by Ruigrok (Van der Kwaak, 2009) included 500 respondents and indicated that the Dutch consumer finds fashion overrated, only 10% states to follow trends, 44% finds fashion very important. Most important to them is shape, price and style, the place of production and uniqueness is less important (Van der Kwaak, 2009).

6.1.2 Consumer survey

Next to literature, the Dutch consumer survey also researched the relation between fashion clothing involvement and sustainable clothing consumption. Beneath this text, table 12 shows the mean and standard deviation results for the fashion clothing involvement variable and the 7 fashion clothing involvement measurement items from the consumer survey, in a descending ranking. Beneath the table the findings are described.

Table 117. Descriptive statistics for fashion clothing involvement items (n=293)

	Mean	SD
Fashion clothing involvement variable	2,66	,98
I do not form emotional connections to my clothes*	3,10	1,26
Fashion clothes are not important to me*	3,09	1,40

I do not feel influenced by fashion in my daily life*	2,86	1,36
I consider fashion clothes an important part of my life	2,75	1,42
I often follow trends and seasons	2,35	1,33
I often choose fashionable clothes that reflect the latest trends	2,32	1,26
Because I find fashion clothes important, I purchase a lot of clothes	2,13	1,32

*negative/reverse scored items minimum   score=1, maximum score=5

In table 12 above, the mean of the fashion clothing involvement variable (2,66) and the standard deviation (,98) are presented. All measurement items scored above 2,0. The highest scoring item is "I do not form emotional connections to my clothes"* (M=3,1), which indicates the sample generally believes they do moderately form connections to their clothes. A similar score has the item "Fashion clothes are not important to me"* (M=3,09), which suggests fashion clothing does matter to the sample. The lowest scoring item is "Because I find fashion clothes important, I purchase a lot of clothes" (M=2,13), suggesting that the sample generally does not believe they purchase more clothes because they find fashion clothes important.

6.1.3 Key findings

The degree of fashion clothing involvement represented in the Dutch consumer was researched via literature research and the consumer survey. Key findings from the research are represented in table 13 below and compared beneath the table.

Table 12. Key findings from literature and survey

Fashion clothing involvement in Dutch consumer	
Literature	**Survey**
Dutch consumer less influenced by fashion compared to other countries.	The sample scored moderately on the fashion clothing involvement scale with a mean of 2,66 and a standard deviation of ,98, representing moderate fashion clothing involvement in the sample.
Fashion less important for reflecting status and role in the Netherlands compared to other countries.	A considerable score (M=3,10) was given to emotional connections to clothes as well as the influence of fashion in daily life (M=2,86), indicating a moderate influence of fashion on the consumer.
The Dutch consumer is moderately fashion concerned, 44% finds fashion very important, 10% states to follow trends, in general Dutch consumers finds fashion overrated and prefers pragmatic fashion.	The mean of the importance of fashion clothes in the sample was 3,09 and the importance of fashion in the consumer's life was scored 2,75, indicating moderate fashion concern. Following fashion trends had a mean of 2,35, indicating low to moderate involvement in fashion trends.

Above table 13 presents key findings from literature and the consumer survey relating to Dutch fashion clothing involvement. Literature suggests the Dutch consumer is low to moderately fashion clothing involved and not a loyal follower of trends. The consumer survey found the Dutch consumer to be moderately fashion clothing involved with a mean of 2,66 and a standard deviation of ,98. Importance of fashion and following trends was only moderately represented in the sample. The survey complements the findings in literature.

6.2 Relationship between fashion clothing involvement and sustainable clothing consumption

6.2.1 Literature

The previous paragraphs focussed on the fashion clothing involvement level of the Dutch consumer. The coming three paragraphs focus on the relationship between fashion clothing involvement and sustainable clothing consumption. The assumption could be that individuals that find fashion a central part of their life, desire to possess more clothes to portray their fashion involved identity. However, research has provided mixed results concerned this assumption.

According to research by Park et all (Park, Kim, & Cardona Fornay, 2006) on the contrary, fashion clothing involvement likely encourages impulsive buying (Park, Kim, & Cardona Fornay, 2006), which is not encouraging sustainable consumption. Research by Farsang et all (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014) found that US consumers that are more invested in fashion tend to spend more money on fashion (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014). Yeniaras & Akkemik (Yeniaras & Akkemik, 2016) found a moderate relationship between materialism and fashion consumption. Materialism also had a positive effect on fashion consciousness (Yeniaras & Akkemik, 2016). This could indicate that materialistic consumers tend to be more likely to be fashion clothing involved, which could in turn indicate these consumers find fashion clothes important and purchase them more often. According to Lee (Lee, 2011), fashion engaged university students tended to know less about environmental issues, showed less environmental concern and were less involved in pro-environmental behaviours (Lee, 2011).

These studies indicated that fashion clothing involvement may encourage unsustainable clothing consumption. The study by Farsang et all (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014) could not prove the assumption that materialistic and fashion involved consumer purchases more clothing. To the contrary, Farsang et all (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014) suggests that those consumers that have higher buying frequencies (for example weekly) also face more consideration in the decision-making stage about environmental concerns. This could be because they are more often engaged in making purchasing decisions in general. Research by Razzaq et all (Razzaq, Ansari, Razzaq, & Awan, 2018) even cautiously suggested fashion involvement could lead to sustainable consumption (Razzaq, Ansari, Razzaq, & Awan, 2018).

The same research of Farsang et all also proposed that environmentally concerned consumers had a moderate correlation with individuality and personal style consciousness, indicating that those that are environmentally concerned are more likely to choose a very personal fashion style (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014). This in turn highlights that environmental concern does not have to decrease fashion clothing involvement or interest.

Research by Cohen & Van der Wijst (Cohen & Van der Wijst, 2015) suggest differently, individuals that care more about sustainability, may care less about fashionability. The research indicated that those who were keener to buy sustainable clothes were less influenced by 'fashionability' of clothing (Cohen & Van der Wijst, 2015). It may be so that environmentally concerned consumers are less influenced by fashion trends, and more so by their personal style.

6.2.2 Consumer survey

Correlation analysis was used to compute the statistical correlation between the fashion clothing involvement results and sustainable clothing consumption results from the consumer survey. A significant negative correlation between fashion clothing involvement and sustainable clothing consumption (r=-.263) was found in the consumer survey.

This negative correlation indicates that those consumers in the sample that were fashion clothing involved, were less likely to portray sustainable clothing consumption attitudes in the sustainable clothing consumption scale, thus indicating the negative influence of fashion clothing involvement on sustainable clothing consumption.

6.2.3 Key findings

The relationship between fashion clothing involvement and sustainable clothing consumption was researched via literature and the consumer survey. Key findings from both sources are listed in table 14 below and compared beneath the table.

Table 13. Key findings from literature and survey

Relationship between fashion clothing involvement and sustainable clothing consumption	
Literature	**Survey**
Some studies found that fashion clothing involvement can encourage impulsive buying and unsustainable clothing consumption. Others suggested a positive relationship between fashion clothing involvement and sustainable consumption.	In the sample there was a significant negative correlation between fashion clothing involvement and sustainable clothing consumption (r=-,263), indicating that those that are fashion clothing involved are less likely to portray sustainable clothing consumption attitudes in the sample.
Materialism was found to be moderately related to fashion consumption.	Not tested in survey.
Fashion engaged students were found to be less environmentally-aware and to perform less pro-environmental actions, although other studies could not prove the relationship.	Not tested in survey.

Above table 14 presents key findings from literature and consumer survey concerning the relationship between fashion clothing involvement and sustainable clothing consumption. Literature suggested that fashion clothing involvement may encourage consumption of fashion clothes, further studies suggested both a positive and negative relationship between fashion clothing involvement and sustainable clothing consumption. The consumer survey sample found a significant negative correlation between the two variables of -,263, complementing the research that found a negative relationship.

Chapter 7. Environmental awareness

The previous chapter focussed on the variable fashion clothing involvement, in the Dutch consumer and the relationship to sustainable clothing consumption. This chapter focusses on the level of environmental awareness in the Dutch consumer and the relationship between environmental awareness and sustainable clothing consumption, according to literature and the consumer survey.

7.1 Environmental awareness level of the Dutch consumer

7.1.1 Literature

Various studies have examined the environmental awareness level of consumers. Research by EC EU suggested that from the EU consumers, 95% finds environmental protection important, they can recognize the effect of environmental issues of their quality of life and many feel consumers too should do more to protect the environment. Although many respondents felt well-informed about environmental issues, some believe more information could further help to make conscious choices. The Dutch consumer has a slightly higher rate of self-perceived information about environmental issues (65%, average in EU is 60%), (ec.europa.eu, 2011).

The finding that 65% of Dutch consumer feels they are aware of environmental issues is complemented by research by ABN AMRO (Hofstede, Henk, 2018), which found that 58% of surveyed Dutch consumers states to be aware of environmental issues and to adapt their lifestyle and consumption slightly. 16% claims to be very environmentally aware and to fully adapt their lifestyle and consumption to it. 19% states to be aware but to not adapt their lifestyle and consumption. Only 8% states to not be aware nor to change lifestyle and consumption to it (Hofstede, Henk, 2018). These studies painted a positive picture of the Dutch consumer environmental awareness level.

According to Gfk (gfk.com, 2017) however, the awareness level of the Dutch consumer is only 46%, combined with the finding that they cannot explain sustainability but rather associate it with a feeling (gfk.com, 2017). Research by Farsang et all (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014) highlighted that compared to Germany, Sweden, the UK and US, the Dutch consumer is less environmentally aware and also least environmentally-concerned (Farsang, Gwozdz, Mueller, Reisch, & Netter, 2014).

The latter studies reflect a low environmental awareness level among the Dutch consumer. However, research among 1.430 Dutch young consumers aging from 16 to 35 years old indicated that 96% of respondents (often) worried about the environment and that this group was more likely to perform pro-environmental behaviour in clothing (at least self-perceived). A significant part of the group stated that they had switched from one brand to another because of environmental motives and to purchase products with an eco-label to support the environment (Cohen & Van der Wijst, 2015).

76% of Dutch young consumers states they do not know the extent to which clothing brands are sustainable or not. The lower price retailers are viewed as less sustainable and it also seems that the Dutch young consumer thinks their preferred brand does contribute to sustainability, their preference increases the sustainability perception, grounded or not (Cohen, Giulietta; Van der Wijst, Lianne, 2015). These findings suggest that the Dutch consumer has environmental concerns, but also faces some knowledge gaps. According to research by PBL 77% of Dutch consumers believes they can make a difference towards environmental problems through their actions (Beckers, T. A. M.; Harkink, E.W.F.P.M; Van Ingen, E. J.; Lampert, M. A.; Van der Lelij, B.; Van Ossenbruggen, R., 2004).

7.1.2 Consumer survey

Next to literature research, the level of environmental awareness in the Dutch consumer was also tested by the consumer survey. Beneath this text, table 15 shows the mean and standard deviation results for the environmental awareness variable and the 9 environmental awareness measurement items from the consumer survey, in a descending ranking. The results are described beneath the table.

Table 148. Descriptive statistics for environmental awareness items (n=293)

	Mean	SD
Environmental awareness variable	3,80	,68
Earth has limited resources and space	4,57	,93
Humankind seriously abuses the natural environment	4,41	,83
The balance of nature is delicate and easily disturbed	4,21	,87
I am aware of the social impact of the clothing that I buy	3,63	1,16
Humans have the right to use the environment for their needs*	3,57	1,24
I am aware of the environmental impact of the clothing that I buy	3,54	1,28
I keep on buying cheap clothes, although I know they will not last*	3,51	1,23
I prefer to purchase without thinking too much about the consequences of it*	3,46	1,27
I do not think of environmental consequences during the purchase of new items*	3,32	1,31

*negative/reverse scored items   minimum score=1, maximum score=5

As can be seen in table 15 above, the environmental awareness variable had a mean of 3,80 and a standard deviation of ,68, which indicates moderate to high environmental awareness in the sample. All measurement items in this scale scored above 3,30, which is considerable. The highest scoring item is "Earth has limited resources and space" (M=4,57). After that item, "Humankind seriously abuses the natural environment" (M=4,41) and "The balance of nature is delicate and easily disturbed" (M=4,41) scored high, showing that the sample generally agrees to these statements. The lowest scoring item was "I do not think of environmental consequences during the purchase of new items"* (M=3,32), which indicates that the sample generally moderately feels they think of environmental consequences of purchasing products.

7.1.3 Key findings

The environmental awareness level of the Dutch consumer was researched through literature research and the consumer survey. Key findings from both are listed below in table 16 and are compared beneath the table.

Table 159. Key findings from literature and consumer survey

Environmental awareness level of Dutch consumer	
Literature	**Survey**
95% of EU consumers finds environmental protection important and recognizes environmental effects. Dutch self-perceived level of information is 65%, which is higher than other EU countries, suggesting a moderately to high environmental awareness level. Of the Dutch young consumers (between 16 and 35-year-old), 96% is worried about the environment and estimated to perform more pro-environmental actions.	The survey focussed on Dutch consumers, of which the sample scored high on environmental awareness scale with a mean of 3,80 and a standard deviation of ,68. All measurement items of the environmental awareness scale were scored higher than 3,30, which is significant and indicates that the Dutch consumer in the sample is environmentally aware and recognizes environmental issues.
58% of Dutch consumers states to be aware of environmental issues and adapts lifestyle slightly. 16% even states to be very environmentally aware and fully adapt lifestyle, 19% is aware and does not adapt lifestyle, 8% is unaware and not adapting lifestyle.	It was not tested in the survey whether consumers adapt their lifestyles according to their environmental awareness.
Others estimate the environmental awareness level of the Dutch consumer to be 46%, as well as less aware and concerned than other EU country consumers.	The results of the survey sample indicate that the (self-perceived) environmental awareness level of the Dutch consumer is considerable, as NEP scale items scored high. This indicates environmental awareness and concern in the Dutch consumer, possibly higher than the 46% mentioned.
76% of Dutch young consumers does not know to which extent clothing brands are sustainable and may face knowledge gaps.	In the sample, (self-perceived) awareness of environmental impacts of clothes was scored 3,54 and that of social impacts was scored 3,63, which shows that the consumers in the sample believe they are aware of these impacts and may not face knowledge gaps.

Above table 16 gives an overview of the most important findings from literature and the consumer survey. Where literature was divided about the environmental awareness level of the Dutch consumer (self-perceived level is 58%, though others estimated it at 46% and less awareness and concern compared to other EU consumers), the consumer survey indicated a positive environmental awareness level (M=3,80 and all items above 3,30) of the consumers in the sample. The survey also gave a different view of the (self-perceived) awareness about environmental and social impacts of clothing, in fact the survey showed a higher awareness level about these subjects.

7.2 Relationship between environmental awareness and sustainable textiles consumption

7.2.1 Literature

As was discussed in the literature review, there is a behaviour-intention gap between environmental awareness and sustainable (textiles) consumption. Though many consumers are concerned about the environment and aware about environmental issues, this does not immediately translate into adaption of behaviour. Pro-environmental behaviour in general considers various factors that influence it. Next to environmental awareness, an individual may also require knowledge, motivations and have an accepting social norm that encourages this behaviour.

Research by PBL categorized the Dutch consumer into three consumer groups and suggests the relation between environmental awareness and sustainable consumption. Firstly, the highly sustainable consumers whom are environmentally-concerned and desire to purchase sustainably. They also accept to pay more for a sustainable product. This group is more focussed on the far away future, is societally-engaged and feels responsibility for sustainability. This group places the responsibility on the consumer level rather than on the government level. The moderately sustainable consumers are environmentally-concerned (somewhat less knowledgeable), but do not necessarily desire to consume sustainably. They are also less inclined to pay more for sustainable products. The last group, the low sustainable consumers are not concerned about the environment, nor do they wish to consume sustainable or to spend more on sustainable products. This group is less knowledgeable about sustainability issues as well as alternatives. They also focus more on the near future and comfort and are less societally-engaged (Beckers, T. A. M.; Harkink, E.W.F.P.M; Van Ingen, E. J.; Lampert, M. A.; Van der Lelij, B.; Van Ossenbruggen, R., 2004).

According to research by Lee (Lee, 2011), those who were knowledgeable about environmental issues were not necessarily willing to pay more for sustainable products. Those who were concerned however, were more willing to pay more sustainable products (Lee, 2011). This coincides with the categorizations of PBL, those who are more environmentally-concerned, are willing to pay more for sustainable products.

The PBL research also indicated that the sustainable consumer groups were more societally-engaged, which could be due to sense of responsibility. Research by Niu and Lin (Niu & Lin, 2018) among 649 Taiwanese consumers showed that environmentally-concerned consumers that also take positive actions have a stronger sense of responsibility, which reinforces their pro-environmental attitude. The study also found that more consumers are looking for 'green' products, which is promoted through a strong sense of responsibility, social norms, environmental knowledge- and consciousness (Niu & Lin, 2018). Environmental knowledge- and consciousness in this case links to a larger demand for 'green' products.

Those individuals that are environmentally-concerned may be more likely to perform pro-environmental behaviour, including sustainable consumption. Peattie (Peattie, 2010) speaks of catalyst behaviours, so-called spill over effects of involvement in on pro-environmental behaviour, such as recycling, may also be a starting point for other pro-environmental behaviours such as purchasing organic food, which was also linked to environmental values and concern (Peattie, 2010). This could indicate that a general environmental concern may lead to sustainable consumption.

7.2.2 Consumer survey

The relationship between environmental awareness and sustainable clothing consumption was researched in literature in the previous paragraph. Correlation analysis was used to compute the statistical correlation between the environmental awareness results and sustainable clothing consumption results from the consumer survey. A significant positive correlation between environmental awareness and sustainable clothing consumption (r=.647) was found in the survey.

This correlation indicates that environmentally-aware consumers in the sample were more likely to score higher on the sustainable clothing consumption scale. This indicates that environmental awareness is positively linked to sustainable clothing consumption.

7.2.3 Key findings

The relationship between environmental awareness and sustainable clothing consumption has been researched via literature and survey research, of which the key findings are listed in table 17 below and compared beneath the table.

Table 1610. Key findings from literature and survey

Relationship between environmental awareness and sustainable clothing consumption	
Literature	**Survey**
There is a behaviour-intention gap between environmental awareness and sustainable consumption. The Dutch low sustainable consumers with low environmental awareness and concern feel less responsible and societally-engaged and are less likely to consume sustainable or to pay extra for sustainable products. Individuals engaging in pro-environmental behaviours feel more responsible, source more often for 'green' products and are more willing to pay more for sustainable products.	In the sample there was a significant positive correlation (r=,647) between environmental awareness and sustainable clothing consumption, it was not tested however if the consumers changed their behaviour accordingly.
Dutch consumers with higher environmental-awareness and concern are more likely to feel more responsible and to consume sustainably.	The survey did indicate that those individuals that were more environmentally-aware also scored higher on the sustainable clothing consumption scale.
Positive catalyst behaviours including sustainable consumption may stem from pro-environmental behaviour, resulting from environmental concern.	Not tested in survey.

Above table 17 visualises the key findings from literature and the consumer survey. Most importantly, in literature there is a behaviour-intention gap between environmental awareness and sustainable clothing consumption, which means environmental awareness does not naturally result in sustainable behaviour. The survey did not fully test this, however a positive correlation between environmental awareness and sustainable clothing consumption was found (r=,647). It was not tested whether this resulted in sustainable behaviour change, but the result suggests an environmentally-aware consumer is more likely to score higher in the sustainable clothing consumption scale.

Chapter 8. Conclusions

This chapter summarises the conclusions of the research and answers the main research question and the research sub questions, as well as testing of formed hypothesises from the literature review.

8.1 Main research question

The ***main research question*** in this research is: "What is the Dutch consumer attitude towards sustainable textiles consumption and how is materialism, fashion clothing involvement and environmental awareness related to this?"

Through literature research, interviews with experts in the field of sustainable textiles consumption and a self-administered Dutch consumer survey (n=293), it was researched what the attitude of Dutch consumers towards sustainable clothing consumption is and how materialistic, fashion clothing involved and environmentally aware the Dutch consumer is. In conclusion, the Dutch consumer has an increasingly positive attitude towards sustainable clothing consumption and can be considered a moderate to high sustainable clothing consumer. Materialism, fashion clothing involvement and environmental awareness were all moderately found in the Dutch consumer sample. Finally, it was researched to what extent these three factors contribute positively or negatively to sustainable clothing consumption. In conclusion, both materialism and fashion clothing involvement contributed negatively to sustainable clothing consumption and environmental awareness contributed positively to sustainable clothing consumption. The sub questions were used to gain an answer to the main research question and further conclusions per subject are given in paragraphs below.

8.2 Research sub questions

Dutch sustainable clothing consumption

- According to literature and interviews with experts the Dutch consumer attitude towards sustainability in clothing consumption is increasing, though it may not concern the entire consumer group.
- The Dutch consumers in the sample scored a 3,76 mean with standard deviation of ,60 for the variable sustainable clothing consumption, which indicates a <u>moderate to high sustainable clothing consumption representation</u> in these consumers.
- Literature, expert interviews and the survey found Dutch consumers moderately concerned with sustainability in purchasing. According to literature they are weakly knowledgeable about sustainability in clothes and are unaware of the amount of owned clothing.
- Dutch consumers expect sustainable clothes to be more expensive, though expert interviews found more economical options in apps and websites are also popular among consumers.
- Second hand clothing has become more accepted, this became apparent in literature as well as expert interview, the consumer survey could not find this increased acceptance, although literature and the consumer survey found that Dutch consumers are familiar with donating unwanted clothes to charity or friends and family.
- Both literature and the consumer survey showed that Dutch consumers show sustainable behaviour in their washing and caring for clothes pattern, as well as the intention to use clothing as long as possible.
- The <u>Dutch consumers can be considered moderate sustainable clothing consumers</u>, due to their score on the sustainable clothing consumption variable and their increasingly positive attitude and behaviour towards sustainability in clothing.

Materialism

- Literature indicated a division to the extent of materialism represented in the Dutch consumer.
- The sample scored a mean of 2,44 with standard deviation of ,73 for the variable materialism, which indicates a <u>moderate representation of materialism</u> in these consumers.
- Literature was divided about the relationship between materialism and sustainable clothing consumption, some sources indicated a negative relationship, where other suggested a positive relationship.
- The sample found a <u>significant negative correlation between materialism and sustainable clothing consumption</u> (r=-.475), indicating that materialism negatively influences sustainable clothing consumption.

Fashion clothing involvement

- Literature suggests the Dutch consumer is moderately fashion clothing involved and not a loyal follower of trends.
- The sample scored a mean of 2,66 and a standard deviation of ,98 for the variable fashion clothing involvement, which indicates a <u>moderate representation of fashion clothing involvement</u> in these Dutch consumers. Importance of fashion and following trends was only moderately represented in the sample.
- Literature suggested that fashion clothing involvement may encourage consumption of fashion clothes, further research found both a positive and negative relationship between fashion clothing involvement and sustainable clothing consumption.
- The sample found <u>fashion clothing involvement is significantly negatively correlated with sustainable clothing consumption</u> (r=-.263), indicating that fashion clothing involvement negatively influences sustainable clothing consumption.

Environmental awareness

- Literature and expert interviews were mildly negative or sceptical about the Dutch consumer environmental awareness level, although in literature two thirds of Dutch consumers believe they are environmentally-aware, and a considerable part of Dutch consumers says they are worried about environmental issues.
- The sample scored a mean of 3,80 with a standard deviation of ,68 for the variable environmental awareness, which indicates a <u>moderate to high representation of environmental awareness</u> in these consumers. Compared to literature, overall the Dutch consumer can be considered moderately environmentally-aware.
- In literature there is a behaviour-intention gap between environmental awareness and sustainable clothing consumption, which means environmental awareness does not naturally result in sustainable behaviour.
- The survey sample found a <u>significant positive correlation between environmental awareness and sustainable clothing consumption</u> (r=.647), indicating that environmental awareness positively influences sustainable clothing consumption.

8.3 Hypothesis testing

Lastly, the hypothesises formed in the literature review were tested using correlation analysis, which computed the path coefficients of the three variables materialism, fashion clothing involvement and environmental awareness from the consumer survey. The results are visualised in table 18 beneath and described beneath the table.

Table 17. Hypothesis testing

Hypothesis	Structural relationship	Variable	Path coefficient	Result
H1	*Materialism will have a negative impact on sustainable clothing consumption*	Materialism	-,475	H1 is supported
H2	*Fashion clothing involvement in fashion clothes will have a negative impact on sustainable clothing consumption*	Fashion clothing involvement	-,263	H2 is supported
H3	*Environmental awareness will have no impact on sustainable clothing consumption*	Environmental awareness	,647	H3 is not supported

As shown in table 18 above, there is a significant negative correlation between materialism and sustainable clothing consumption (r=-.475), resulting in support of the first hypothesis. Secondly, fashion clothing involvement is significantly negatively correlated with sustainable clothing consumption (r=-.263), resulting in support of the second hypothesis. Lastly, there is a significant positive correlation between environmental awareness and sustainable clothing consumption (r=.647), resulting in no support for the third hypothesis, rather it indicates that environmental awareness positively influences sustainable clothing consumption, where materialism and fashion clothing involvement negatively influence sustainable clothing consumption.

8.4 Recommendations for further research

This research was able to form a view of Dutch consumer attitude towards sustainable clothing consumption and relationships between various factors and sustainable clothing consumption. Dutch consumer research towards sustainability is however a 'young' area of research and order to transition to a more sustainable society it is beneficial to further research the subject.

Due to time and word limitations cross-analysis of the survey data could not be performed, though this may have proven interesting, for example differences in attitudes found based on age, gender, education etcetera. are found in existing consumer research and could be compared to that. A larger consumer sample which represents the Dutch consumer more accurately based on gender and age groups could also prove beneficial in future research. Finally, this research found a positive influence of environmental awareness on sustainable clothing consumption in the consumer sample, where in literature this is not a natural relationship and not easily proven, thus further research could broaden understanding of this relationship.

Appendices

Consumer survey clothing consumption

Dear respondent,
firstly, thank you for participating in this consumer survey, through this survey you contribute to Master thesis research about the attitude of the Dutch consumer towards sustainability in clothing consumption. The results of this survey will be used to create consumer profiles of Dutch consumers based on their attitue towards sustainability in clothing consumption. This survey is exclusively aimed at the Dutch consumer. The survey takes about 5 minutes to fill in, The deadline is June 30th.

The survey is split up into four parts, of which the first part is about materialism, the second part is about fashion clothing involvement, the third part focusses on awareness and the fourth part concerns sustainable consumption. After this some personal questions follow.

In the parts, a range of statements follow, in which you are asked to which extent you recognize or agree to the statements or not, based on a 5-point scale, ranging from 1. Strongly agree, 2. Slightly agree, 3. Neutral, 4. Slightly disagree and 5. Strongly disagree.

Materialism

Please indicate to which extent you agree or disagree with the following statements.

Materialism is concerned with the important of worldly possesions by humans.

*

	Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree
"I usually only purchase the clothing I need"	○	○	○	○	○
"I try to keep my life simple as far as possessions are concerned"	○	○	○	○	○
"The possesions I have are not that important to me"	○	○	○	○	○
"Purchasing products brings me satisfaction"	○	○	○	○	○

"I envy people who own expensive possesions, such as an expensive car, house or clothing"	○	○	○	○	○
"I see owning expensive possesions as signs of success"	○	○	○	○	○
"I have everyhting I really need to enjoy my life"	○	○	○	○	○
"I would be more satisfied if I were able to purchase more products"	○	○	○	○	○

Fashion clothing involvement

Please indicate to which extent you agree or disagree with the following statements.

Fashion clothing involvement means the importance of fashion clothes in someones life.

*

	Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree
"Fashion clothes are not important to me"	○	○	○	○	○
"I consider fashion clothes an important part of my life"	○	○	○	○	○
"I often choose fashionable clothes that reflect the latest trends"	○	○	○	○	○
"I do not feel influenced by fashion in my daily life"	○	○	○	○	○

"I often follow trends and seasons"	○	○	○	○	○
"Because I find fashion important, I purchase a lot of clothes"	○	○	○	○	○
"I do not form emotional connections to my clothes"	○	○	○	○	○

Environmental Awareness

Please indicate to which extent you agree or disagree with the following statements.

Awareness means the extent to which someone understands environmental issues and how human behaviour contributes to them.

*

	Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree
"Humans have the right to use the environment for their needs"	O	O	O	O	O
"I prefer to purchase without thinking too much about the consequences of it"	O	O	O	O	O
"Earth has limited resources and space"	O	O	O	O	O
"I am aware of the social impact of the clothing that I buy"	O	O	O	O	O

"I am aware of the environmental impact of the clothing that I buy"	O	O	O	O	O
"The balance of nature is delicate and is easily disturbed"	O	O	O	O	O
"Humankind seriously abuses the natural environment"	O	O	O	O	O
"I keep on buying cheap clothes, although I know they will not last"	O	O	O	O	O
"I do not think of environmental consequences during the purchase of new items"	O	O	O	O	O

Sustainable consumption

Please indicate to which extent you agree or disagree with the following statements.

Sustainable consumption means consuming to fulfill basic needs without overexploiting the environment for it.

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*

	Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree
"I prefer to shop without carefully planning what I need"	○	○	○	○	○
"I prefer to buy second hand, vintage or swap with friends/family than to purchase fast fashion clothes"	○	○	○	○	○
"Sustainability is not one of my criteria when shopping for clothes"	○	○	○	○	○

"I do not pay attention to the materials that are used to make my clothing'"	○	○	○	○	○
"I wash clothing at low temperatures (30-40 degrees)"	○	○	○	○	○
"I tumble-dry my clothes instead on line-drying them"	○	○	○	○	○
"I throw away broken clothes instead of repairing them/getting them repaired"	○	○	○	○	○
"I try to wear/use my clothes as long as possible"	○	○	○	○	○
"Unwanted clothes I sell, give away to friends/family or donate to charity"	○	○	○	○	○
"I try to reuse my unwanted clothes, for example as cleaning rags"	○	○	○	○	○

Personal questions

What is you gender? *

○ Man

○ Woman

○ I prefer not to say

What is your age? *

○ 16-30 years old

○ 31-44 years old

○ 45-64 years old

○ 65+ years old

○ I prefer not to say

What is your highest level of education? *

○ Middle school

○ High school

○ Bachelor's degree

○ Master's degree

○ I prefer not to say

In which Dutch province do you live? *

Choose   ▼

The end

Thank you for filling in the survey.

Appendix B. Consumer survey results summary

Scales and items	Correlation with sustainable clothing consumption	Cronbach's alpha	Mean	SD
Materialism	-.475	.751	2.44	.73
I usually only purchase the clothing I need*			2,40	1,38
I try to keep my life simple as far as possessions are concerned*			2,65	1,25
The possessions I own are not that important to me*			3,36	1,18
Purchasing products brings me satisfaction			3,20	1,15
I envy people who own expensive possessions, such as an expensive car, house or clothing			1,90	1,13
I see owning expensive possessions as signs of success			2,21	1,30
I have everything I really need to enjoy my life*			1,64	,91
I would be more satisfied if I were able to purchase more products			2,18	1,30
Fashion clothing involvement	-.263	.857	2.66	.98
Fashion clothes are not important to me*			3,09	1,40
I consider fashion clothes an important part of my life			2,75	1,42
I often choose fashionable clothes that reflect the latest trends			2,32	1,26
I do not feel influenced by fashion in my daily life*			2,86	1,36
I often follow trends and seasons			2,35	1,33
Because I find fashion clothes important, I purchase a lot of clothes			2,13	1,32
I do not form emotional connections to my clothes*			3,10	1,26
Environmental awareness	.647	.780	3.80	.68
Humans have the right to use the environment for their needs*			3,57	1,24
I prefer to purchase without thinking too much about the consequences of it*			3,46	1,27
Earth has limited resources and space			4,57	,93
I am aware of the social impact of the clothing that I buy			3,63	1,16
I am aware of the environmental impact of the clothing that I buy			3,54	1,28
The balance of nature is delicate and easily disturbed			4,21	,87
Humankind seriously abuses the natural environment			4,41	,83
I keep on buying cheap clothes, although I know they will not last*			3,51	1,23
I do not think of environmental consequences during the purchase of new items*			3,32	1,31
Sustainable clothing consumption		.671	3.76	.60
I prefer to shop without carefully planning what I need*			3,74	1,31
I prefer to buy second hand, vintage or swap with friends/family than to purchase fast fashion clothes			2,81	1,50
Sustainability is not one of my criteria when shopping for clothes*			3,13	1,29
I do not pay attention to the materials that are used to make my clothing*			3,57	1,29
I wash my clothes at low temperatures (30-40 degrees)			4,60	,77
I tumble dry my clothes instead of line-drying them*			4,06	1,27
I throw away broken clothes instead of repairing them/getting them repaired*			3,07	1,32
I try to wear/use my clothes as long as possible			4,48	,77
Unwanted clothes I sell, give away to friends/family or donate to charity			4,48	,94
I try to reuse my unwanted clothes, for example as cleaning rags			3,61	1,35

Participant Consent Form

"How can Dutch consumers make the fashion system more (environmentally) sustainable by adopting a more sustainable textiles consumption pattern?"

- I voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that participation involves sharing visions of sustainable textiles- consumption behaviour.
- I agree to my interview being audio-recorded.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research my identity will remain anonymous if preferred. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I understand that disguised extracts from my interview may be quoted in the researchers master thesis "How can Dutch consumers make the fashion system more (environmentally) sustainable by adopting a more sustainable textiles consumption pattern?"
- I understand that signed consent forms and original audio recordings will be retained in the researcher's private online storage.

- I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact the researcher for further clarification and information.

Signature of research participant

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Signature of participant   Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

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Signature of researcher   Date

Appendix D. Semi-structured questionnaire for expert interviewees

Note: the beneath table is an example of a semi-structured questionnaire to be used for interviews with experts. The experts may have different roles and backgrounds and so the questionnaire is adapted to this in practice. It can also occur that questions may be added or deleted due to relevance. Note also that the questions are asked in Dutch due to convenience for the interviewee.

1. Can you introduce the company that you are working for and what their link to sustainability in clothing is?
2. How do you characterise your customers? (are they specifically sustainability-oriented)
3. How do you encourage consumers to make more sustainable choices?
4. What can you say about the Dutch consumer attitude towards sustainable clothing consumption?
5. How do you envision sustainable textiles consumption? (what should consumers buy, how should they decide what clothing to buy, how can they care better for their clothing or give it a better reuse)
6. Do you think the Dutch consumer is ready to consume sustainably by consuming less and making better choices regarding clothing?
7. What do you think is currently holding them back from consuming sustainably?
8. What can motivate the Dutch consumer to consume more sustainably?

Appendix E. Interview transcripts

In this appendix, the interview transcripts from the interviews with experts can be found.

Interview Frysian circular pullover – Blackmore

Date: 03-07-2019

Interview type: physical interview

Interviewer: Mayte Leinenga (ML)

Interviewee: Eileen Blackmore (EB)

ML: Can you introduce the company that you work for and the relationship with sustainability? Erfskip, looped goods and house of design. Where did the idea come from?

EB: I work for 23 years for House of Design, which started as an online portal to promote product designers. Presenting global art and design, and the tools and traditions that encompass that. Since 2003 we promoted design in the North of the Netherlands. Since 2007 I started with sustainable design project, but I felt as if I was telling my story in the desert and nobody heard it. No sustainable design is more an issue and people contact me if it is about this subject.

In the project I initiate and organise, I place designers centrally in the value chain, designers choose the materials and require knowledge. Also, the product needs to be produced and needs a market. And is it heritage or biodegradable? I embed this to projects about maker knowledge and craftmanship. I find maker education very important, since we are more and more lacking education that teaches craftmanship. I develop projects with schools to connect children with craft, they learn to design for 3d printing, they are taught both old techniques and modern ones. Hopefully this will encourage them to choose a creative or technical subject in school and career. By having these partnerships, designers will know where they can find someone to produce local products. The students also learn more about how products come to be, and I hope to spark that in them, that they think about materials and design instead of taking it for granted.

I formulated two chains, firstly the production chain, which includes the designer, material, knowledge, production, market and end of use. Secondly, the value chain, which includes the value if the links in the chain are linked to sustainable goals like biodiversity (using renewable crops), no-waste (using waste streams), local employment (maker education), new markets (changing consumer behaviour), business models. This is how we approach circular economy.

For the cultural capital Leeuwarden 2018 we created flax souvenirs. I met Loop.a life during the Dutch Design Week in 2016, who works with recycled wool. Together with It Erfskip we created a circular pullover made from recycled wool (collected by Omrin and the salvation army) and combined it with locally-produced flax.

The inspiration for the design comes from traditional Frisian costume and the shape how flax can be found drying on the fields. We chose this because we want people to feel connected with Friesland and to create identity. We worked with launching customers such as Omrin, municipality Leeuwarden and NDC (media group including newspaper). The pullover itself is not yet produce-able in Friesland, but I think this is a starting point to make people aware. It is not yet possible because in the Netherlands we do not have all the required tools and machinery to completely produce the materials here, and also it would cost more than 300 euros for one pullover to do that here. This is why the material is sourced here with help of Omrin and the salvation army. Flax used to be produced in Friesland, which also stimulates biodiversity as a rotation crop and these areas to

work with circular economy and provides work. The wool was sorted by colour, so we did not have to bleach it first. This was processed in the Netherlands and brought to France to spin it. After that it continued to Portugal, where the yarns were knitted into pullovers. This total process costed already that much that we had to ask more than 100 for the pullover, to do it completely in the Netherlands, the pullover would cost more than 300 euros.

ML: How do you characterise your customers?

EB: The Frisian circular pullover is not only purchased by Frisians, but also by consumers in Groningen and abroad. It is about the pride of owning a locally produced product, made from traditional materials. This is also what I want them to experience, they should feel proud that they own something locally made, instead of a bargain.

ML: What can you say about the Dutch consumer attitude towards sustainable clothing consumption?

EB: The Dutch from history have traditionally been tradesman, which means they know how to make trade and are proud if they find a bargain, the same for clothes. I would like to see this the other way around, that they are proud to own something locally-made.

The Dutch are less influenced by hierarchy and less focussed on quality, if a cheap t-shirt becomes waste in just two weeks, they accept it. Other countries, for example France and Germany are more focussed on quality. The Dutch are conceptually strong (Dutch design), but qualitatively weak, they are able to change very fast.

ML: How do you envision sustainable textiles consumption?

EB: Clothing should be produced locally and with renewable sources, recycling should be in place. Hemp and flax could be used in local making industries, which is not only beneficial economically, but also psychologically (the making experience). We do not forget global chains, but we create local networks that work together to inspire one another. We for example have hemp, flax, elephant grass and seaweed, Austria for example has Tencel, we can work together. This would mean there are clusters of resources, small local economies can work together. Next to economically, this would bring back the pride in regions. As we have moved industries beyond our country borders, the pride of making these products has faded. If we have this local industry, people also do not need to ship all kinds of items from one country to another and we do not have to live in big cities only. This has been changing through time as well, sometimes industry was more in the villages, other times more in the cities. The value has to be revalued.

Next to that, there has to be a turning point where resources are leased and not necessarily owned by consumers, rather by the designer or producer, so that this can be refed to the system.

ML: Do you think the Dutch consumer is ready to consume sustainably by consuming less and making better choices regarding clothing?

EB: The large group of consumers you may not be able to convince, but we have to be patient. Perhaps it will take two generations to change something, luckily, the current twenty-year-old generation can find a lot of information online and make conscious choices and work together and share products. These are new consumers, we can already see that organic and sustainability is rising in popularity, the demand for these products is growing. The next generation will live in a world that is already prepared to live more sustainably.

ML: What do you think is holding them back?

EB: Marketing and commerce have made us buy as much as we can, we have become rich and reacted to commerce, the cheaper the better. This is why business models too should change.

ML: What can motivate the Dutch consumer to consume more sustainably?

EB: The most important is good quality (durability), secondly aesthetically it needs to look good and timeless. Another option is a leasing construction, such as MUD jeans and Swap fiets, stimulating new ownership of resources. The story is very important, this has to be told well to various target groups. It is important to include people in the process of how the product came to be and to make this visible. This may be with blooming flax fields and happy workers behind spinning- and weaving machines. Elements are needed that people want to associate with, showing pride that they have contributed something.

Interview Escape the System – Dijk
Date: 15-05-2019

Interview type: physical interview

Interviewer: Mayte Leinenga (ML)

Interviewee: Sippie Dijk (SD)

ML: Can you introduce the company that you are working for and what their link to sustainability in clothing is?

SD: I am a shop owner of a shop with eco fabrics and also a small production line of clothing produced in the Netherlands. Next to that we have the Green sewing academy, where I teach people to sew again, so they can become their own clothing producer. I see that they too, are buying more eco fabrics now that they are more into the process.

For sustainability it's important to start with the source. Ecological means a good fibre that is in harmony with nature, with fair wages for workers, a circular system. Sustainable is not necessarily organic, it is about durability, which is confusing and is also abused through greenwashing. After sustainability was misused the last years, now people call it ecological and they find new names each time.

I tell my customers the story, most people make their story more beautiful than it is. I cannot pretend that my story is one big success, it is very hard work, all my money goes back to the business.

I find fibre very interesting, because we are also made from fibre, god used fibre to make the humans. I think cotton and hemp are made to be clothing, I think viscose and bamboo are not suitable for fibres, because they are for something else. Both fibres need a lot of processes in order to make it soft and suitable.

My mission first was to change Franeker, I thought people would understand why it is necessary. It was clear to me, I wanted to do something for the environment. In my store I can tell my own story, with my Green fashion academy I can decide the whole content. There is a solution to these environmental issues, but it will not happen. I believe in God and think people cannot solve the

problem, we think we can live without the rules of nature. When you keep exploiting soil, you trespass god's nature laws. The bible talks about soil fertility, there was a cycle, now largely they let go of this idea. If you look at the bible, it gives us instructions on how to live with nature. We use oil for clothing, which we should not use, because this goes wrong. In the time of the bible, there were rules. Now industry can decide how long something goes. The panty hose is a good example where first they lasted forever, then they designed it so that it would rip, which meant money can be made. Things are made to break down called obsolescence, there is no laws for this. If for clothing there was regulation, there would be change, but it will not happen. Sweden was looking into regulation where they could have the producer responsible for harming the environment, sadly the law never passed, because the responsible minister was murdered. The whole fashion industry is very polluting.

Hemp was used for jeans, but in the industrial revolution they wanted to use cotton plants, they decided to use hemp's image about weed to give them bad publicity and image, this happened to the fibre and still suffers from this. The first association is with drugs and it was grown much less. Hemp is very suitable as a plant, for food clothing and a roof, this is what hemp has to offer. Cotton on the other hand in a mono culture, which enables for illnesses, they require more water. What happens to these plants is that they need lakes for water, everything is exploited, and the area is simply left. This is where it would be good if they used the ecocide law, they could hold the producer responsible. The demand for hemp is not that high yet, which makes it more expensive. God wants people to live in paradise, so I am not doubtful about this.

ML: How do you characterise your customers? (are they specifically sustainability-oriented)

SD: My customers are not necessarily looking for sustainable clothing, usually they walk in and they see something they like. If it is sustainable it is a plus for them. Sustainable should be the norm so that consumers do not have to think about sustainability in clothes. The responsibility for sustainability in clothes should be at the producers and sellers. Government should regulate this.

I think it's a funny tendency, where they make lingerie from banana plants, I asked why not from hemp, but they thought banana plants were more innovative, I ask myself why not use something that is already there. I see now that innovative plans are more interesting than something that is already there.

ML: How do you encourage consumers to make more sustainable choices?

SD: In my store I can tell my story. Some consumers are concerned about the environment, then I explain to them. They do not necessarily have to buy something, but telling the story is the best that I can do. My belief has grown the past years. Maybe people did not realise the consequences of producing these panty hoses that do not last, people cannot oversee everything, we didn't make the earth, we have to learn how things work.

ML: What can you say about the Dutch consumer attitude towards sustainable clothing consumption?

SD: There is a lot of distrust about sustainability and people already believe it is too late and that their contribution does not matter. Also, some consumers do not have the money to buy sustainable products. Which is a bit weird if you think about it, because sustainable products should be cheaper than environment harming products.

ML: How do you envision sustainable textiles consumption? (what should consumers buy, how should they decide what clothing to buy, how can they care better for their clothing or give it a better reuse)

SD: Sustainable clothes start with sustainable sources: everyone should wear hemp or bio linen. It should be policy that the producer is only allowed to use hemp or bio linen, this would sort out the problem. No more synthetic materials in the clothing cycle. This would mean the consumer would not have to think about what they can buy and what not. The clothing could then also be composted, which means the consumer does not have to worry about this either. It would be beneficial if clothes would be shipped with sailing ships. Hemp is also very versatile and can grow everywhere, which means there could be local small-scale production of clothes.

ML: Do you think the Dutch consumer is ready to consume sustainably by consuming less and making better choices regarding clothing?

SD: I think everyone is stuck in this system, you need time and money which makes it harder. It takes about 15 years to really change. I also see this with the students I teach at Stenden about clothing and design. Almost all student in fashion want to work for big brands.

I do not think the Dutch consumer can make this transition on its own. They are not ready for sustainable, it should be policy instead. If the right sources were used, it would not be necessary even to consume less, since then the source would return to the soil and start over.

ML: What do you think is currently holding them back from consuming sustainably?

SD: Personal circumstances, misleading information from the fast fashion world, they pretend to already do a lot to change the system. Perhaps also apathy.

ML: What can motivate the Dutch consumer to consume more sustainably?

SD: Make sure the supply of sustainable clothes grows and is visible in the shopping streets, not only in the big cities, but also in smaller cities. Give the production worker a voice and let producers and sellers work together more. A shop can be a showroom and atelier for sustainable clothes, no online web shops that have goods returned often on returning goods. This may mean that the workers work part-time in the shop and part-time somewhere else to sustain themselves (Dijk, 2019).

Interview Recycle Boulevard – Forrer

Date: 06-05-2019

Interview type: physical interview

Interviewer: Mayte Leinenga (ML)

Interviewee: Forrer (F) (preferred to not use first name)

ML: What is the relationship between the recycle store and sustainability in fashion?

F: Clothing is brought in by people themselves or picked up from house to house and from underground clothing containers from Omrin. They are transported here or to the other 6 stores of Omrin. Then it is sorted out in the stores into clothing that is suitable for resale and clothing that is unsuitable for resale, which are items that are not clean, are broken or wet. Those that are not suitable for resale but are clean go in yellow bags and are sold by kilo, which goes abroad or are made into cleaning cloths/rags. The items that are suitable for resale and unclean are thrown out and pressed together for Omrin to process.

On average we can use 10%-20% to resell and 70% goes in yellow bags. During the year all kinds of textiles are donated, including clothing specifically for summer, winter, carnival, weddings or other

occasions, even when we cannot sell those in the current season, we keep these items for the coming season upstairs in boxes.

The percentage that is resold is not a lot, but we make a conscious choice to choose quality. Most of the donated clothing is worn out, we could accept much more in our store, but the problem is that this stains the image. We do not want the old-fashioned image of dirty and smelling second hand clothes that are worn out.

We now have a corner with cheap prices containing clothing that may be a bit more worn out, those items are sold quickly, we can either put it in yellow bags or sell it in the cheap corner. We have to make a choice there, because both choices require different amounts of time and different profits. Sometimes it is cheaper to simply put it in yellow bags.

ML: Can you see a difference in the content of the clothing donated? For example, is the quality or amount donated changing?

F: Alie has worked here for 20 years already. We have grown a lot, before it was only one bag of textiles donated by people, it was then not brought to us by Omrin from underground clothing containers. We have grown a lot and now have 35-40 people working here. I think the content it hasn't changed much, it depends on the route, if it comes from the city or the suburbs, which we do not always know.

Most clothing is worn out, most of it is women and children's clothing. Men's clothing has traditionally been a much smaller amount of the average content. We receive a lot of stuff from Primark, ZARA, H&M which is dumped at our recycle boulevard, even after closing time they dump it at our site. But we also receive branded clothing, even with price tags still on it, which can come from consumers but also unsold stock from stores.

After King's day we got a lot of donations, which were also wet, and it is a lot of rubbish. Most of it is ready for the trash, 5% is resalable only. This is because the nicer items are already sold at the market. This is usually the case after holidays, that unwanted clothing is donated en masse.

It also happens that clothing that is broken, dirty or stained with paint is brought here, but this is not strictly our task to process and so gives us extra work. These items cannot be resold but are not picked up separately from the trash.

ML: What kind of customer do you see in the second-hand shop?

F: We have groups of consumers who have less money to spent on clothing and that need to buy cheap or free apparel. On the other hand, we also have customer that have more money and that buy for sustainability reasons. Then we also have those customers that resell second hand clothing and that look for certain pieces. We price wanted items higher, because the resellers will pay that price anyway.

ML: What can you say about the Dutch consumer's attitude based on the donated clothing items? Do they overconsume? Do they buy poor quality? What do the donations reflect?

F: We receive a lot of clothing that is worn out, and a lot of low-quality pieces such as from H&M, ZARA and PRIMARK. You hear more and more that people clean up their closets because they do not wear some clothing items anymore. The last few years we see a lot of clothing is sold through websites by consumers, we then tend to get the lesser pieces that are not sold.

I see my neighbours buy branded children's clothing, because the quality is good. This means they do not buy H&M clothes because they can resell the branded items faster, because those last.

Because the donated clothing is selected better, it is more and more acceptable, people are amazed by the quality and style of the clothing. It does not smell here, though we do not even wash our clothing. We simply make very qualitative selections which allows for a nice second-hand clothing collection. For young children from 10 onwards we notice second hand is not that popular, they prefer to be dressed in the same brands as their peers. Among young adults the awareness grows and thus it is more acceptable to buy and wear second hand and vintage clothing.

ML: Why do you think the Dutch consumer is not purchasing sustainably?

F: Some people are addicted to buying clothing, others buy to resell.

ML: What can motivate them to consume sustainably?

F: We think people buy second hand because it is cheap, not because of sustainability. Awareness is very important. We think some consumers choose consciously to check whether the second-hand store has the clothing item they look for, before they buy it new in store.

We think the Dutch government is not focussing on sustainability in fashion that much, because they cannot make money from that. It would be nice if clothing unsuitable for resale would be shredded to be recycled to produce new clothing.

ML: What is your vision of sustainable clothing consumption?

F: I do not think you can buy all your clothing second hand, you need some new things also.

ML: Why is it so important to buy second hand clothing?

F: It is important because of reuse, we live in a throwaway society, here clothing gets a second change to make someone happy again. It is not the only reason, but it is also important for those who have less to spend and to have a bit of a trip somewhere.

People with more money also buy second hand because of sustainability, but even they still think it is expensive sometimes.

ML: What can motivate the Dutch consumer to consume more sustainably?

F: Mouth to mouth talk and some promotions that we do, to make them conscious of what is available. A lot of people do not know what we do here. We have different projects and people that work on reusing fashion for other purposes. For example, we have a lady who reused film canvas into bags, a lady who reuses men's ties into a dress and bag and a lady who reused old denim into denim dresses.

We want to inspire them to make things themselves with items, for example a chair made of belts or a dress made from ties. We do not have enough time to create inspiration corners, sadly. Pinterest also helps to find a lot of creative ideas for reuse.

ML: What would you like to see in the second-hand store that would help you reuse clothing more?

F: The past weeks were holidays and Ramadan is starting, which means we do not have a lot of people to sort and price the clothes. The flow from king's day and the regular flow keeps coming however.

We used to have someone that could repair some clothing items with a sewing machine. We often have customers who tell us they really like a clothing item, but it is too long for them and they are not that handy themselves and do not want to take it for repairs in a shop. It would be convenient if we had such a repair service ourselves. We did try this before, however it was not that successful. The problem is also that perhaps the sewing machine breaks down, or we lose the volunteer, we need someone the entire week. Now we have a lot of clothing piling up that needs small repairs, such as a broken zipper, broken seams etc (Forrer, 2019).

Interview PassingbyLinda – Nauta

Date: 29-05-2019

Interview type: physical interview

Interviewer: Mayte Leinenga (ML)

Interviewee: Linda Nauta (LN)

ML: Can you introduce the company you work in and what the link to sustainability is?

LN: I always liked vintage and second hand, I studied retail at first and moved to Amsterdam to work in stores, like Levi's. I noticed more and more customers were asking about the material that was used in the jeans and the source. I did two courses, painting and personal styling. I started to do personal styling, first with friends, I look at their wardrobe and make new sets of outfits for them. I ask them to put apart the items they find hard to combine in outfits. If after the process a customer still needs a certain item, I try to source that in a sustainable way, by searching sustainable brands, second hand and vintage. I think now there is more freedom to start something for your own, like your own company.

Currently I am not necessarily working with capsule wardrobes, I work with 7 days 7 outfits, I also take pictures of the outfits, so they can look back at how they looked.

A lot of people are doing something about sustainability and the big retailers too make use of this trend and present sustainable or conscious clothing collections, but it is very hard, because you also have to check everything, how many audits they get etcetera. Not every consumer is going to ask this of brands and especially stores that offer these brands may not know the details about this brand's sustainability. Luckily more and more sustainable brands open their own factories (albeit in China), which means they can control the production.

ML: What can you say about Dutch consumers and their relationship to clothing?

LN: What I see that many consumers buy one piece of clothing each time, but because each time it is one piece, they cannot see it in the wardrobe anymore. This is why I always ask them to put all the items that they cannot combine well apart. You always have items that are gifted, those that for special occasions, the basics that are always bought.

I also had a customer that lived minimalistic, she always noted how much she wore her clothing in a notebook. She would get rid of it if she did not wear it a lot. I didn't expect her to be so extreme, but she wanted to look at her wardrobe in a different way.

ML: Do you think the Dutch consumer is open to sustainable clothing consumption?

LN: More than before, but I still think there is this image about sustainable clothes being old fashioned and expensive. Luckily more and more is available in the right price range. Some brands do

not show that they use organic cotton, but they do. I think the consumer is generally not that concerned. Maybe because Amsterdam sustainability is more of a hot item. I notice that people in Amsterdam in stores where I worked asked more about sustainability. People in Friesland sometimes really do not care about the sustainability of the product. One customer wanted to know why a pair of trousers was so expensive, I explained to her that it was produced sustainably, without pesticides etcetera and she literally said she did not care. I think people do not care because these effects and factories are far away.

When I did my styling course I noticed none of the students knew about sustainability, this amazed me.

Myself I was not concerned with the origin, but now I look at that much more, but I think it will take up to 20 years to really change. The food industry too is starting, but still not everything is sustainable. It has gone on too long, and if we start to ask a fair price now, prices will go up much and we still will not know if this money is actually going where it needs to be or just more profit for the retailer.

ML: What can motivate the Dutch consumer to consume sustainably?

LN: I think it is important to be more aware of your wardrobe and what is in there, instead of purchasing more and more. The same is with food. Another option is vintage clothing, which tends to be more unique also. It is hard to say, most people chose safety and want something normal, not something unique.

I don't understand why it can go on like this, it probably costs so much money that they are not starting, there

ML: What do you think is holding them back to be sustainable with clothing? What problems do they encounter?

LN: I do not think every consumer is that concerned, and everybody has their own style, they choose safety. The customers I help were generally slightly concerned with sustainability, or they want more colours in their wardrobe.

People still think the recycle shop is dirty and they cannot find something themselves in the recycle store. Sometimes when I find something from there for them they really like it, but this is still a guess. It differs per client, some already purchase second hand clothing. There is also a paradigm around second hand clothing being called sustainable, although this is not necessarily sustainable of course.

A budget given by the client can be hard to work with, for example they want to only pay 25 euros for a trouser, not 50 euros. If you want quality, you have to pay more.

ML: How does wardrobe management help the consumer to consume sustainably?

LN: Some customers tend to look differently at their closet after I visited, and they ask me to return.

ML: How do you envision sustainable clothing consumption?

LN: This is different for everyone, some are concerned, and some are not. If you purchase something new, at least make sure that you can combine it well. Socks, underwear you buy once, the rest you can combine.

I read and saw in a documentary and saw that Zara makes multiple clothing collections and the one that is produced the fastest is used, and the other ones are simply burned, I mean you also do not find returned Zara items in the stores and perhaps those are also burned. I would prefer to see that people bought on order, so that nothing is wasted. I like systems where shops present what you can order and after your approval they make it (Nauta, 2019).

Interview Unrobe – Ubachs

Date: 16-04-2019

Interview type: email interview

Interviewer: Mayte Leinenga (ML)

Interviewee: Daan Ubachs (DU)

ML: How do you describe your customers?

DU: Our customer is a millennial consumer aging from 18-35 years old. They are mainly enthused by the story of Unrobe and our mission. They reach us online, through social media, influencers and pop-up stores or websites of other sustainable brands which we collaborate with, like Heineken, Dopper, DGTL, Amsterdam Open Air. These brands are highly interested in sustainability.

ML: How do you encourage your consumers to consume sustainably through your brand?

DU: By telling our story transparently, in everything we do. The production processes, purchase prices and margins are transparent, which makes us different from the status quo.

What is according to you the attitude of the Dutch consumer towards sustainable clothing?

More and more is published about it but knowledge is still lacking in the industry. Often, we still like to choose to not see the impact. But when someone sees revealing documentaries like the 'true cost', they chose differently. In that case I mainly think this influences the Dutch millennial consumer, the elders are less interested. The food industry already started this awareness 5 years earlier and remain to be leading the way.

ML: Do you think the Dutch consumer is ready to consume sustainably?

DU: It remains to be a niche. It will take another few years for it to jump into the mass market, let's hope the Dutch consumer is ready.

ML: How do you envision sustainable clothing consumption?

DU: The most sustainable option is of course to purchase nothing or second-hand clothing. We notice that no consumer choses only one option, the wardrobe is a combination of brands. Unrobe is a very sustainable option, we use highly certified organic cotton, recycled quality and ethical production close to home (Portugal) in order to reduce GHG emissions. We do not use chemicals or pesticides and use circular dye houses and laundries. Via a QR code in the product you can find out everything about where, how and whom produced the garment.

Consumers should more consciously ask themselves whether a t-shirt of 3 euros is possible and to look into the care label to see the source. In this way the consumer can still get a good image of how the garment came to be.

ML: What do you think is currently holding back the Dutch consumer to make sustainable choices? What can motivate them to consume sustainably?

DU: There is still a lack of knowledge. Often consumers would like to buy sustainably, but do not know how. It can also not be too expensive. People are prepared to adapt but then it should not be too different from the old way. This is why Unrobe choses to make sustainable, ethical clothing for affordable prices (Ubachs, 2019).

Interview Vintage Marketplace Facebook group – Uiterwaal

Date: 18-05-2019

Interview type: Skype interview

Interviewer: Mayte Leinenga (ML)

Interviewee: Michael Uiterwaal (MU)

ML: Can you introduce the company that you are working for and what the link to sustainability is?

MU: I buy and sell vintage furniture, like leather sofas, closets etc.

Honestly, I am not consciously busy with sustainability, I like vintage clothing because of the memories, I wore them when I was younger, and those clothing pieces are coming back. I do have designer pieces, I buy it for the design mainly. But I also purchase clothing form H&M because I want something that is in the correct size right away, which is not always the case with vintage and second hand.

ML: How do you characterise your customers?

MU: My customers buy because they think it is beautiful, not for sustainability. My customers are in the mid segment, they have money to spent, they do not go to IKEA for furniture. They want leather which is expensive if new and vintage can be priced lower sometimes. If you have a good quality leather sofa it stays beautiful.

It is more acceptable now to have a used sofa, this started with younger people and people that did not have much money, but that those who have money buy now also. It is a paradigm shift in the way of thinking about buying second hand. My girlfriend Regina worked in Episode (vintage store), the customers there were students, but all layers of society come there to shop. I am not sure it has to do with sustainability. The materials used from older times tend to be more qualitative. A few years back, it became hip to be concerned with sustainability.

ML: How do you characterise the consumers active in VMP? (are they specifically sustainability-oriented)

MU: We currently have 41.000 users, this has doubled from a few years back. First, we had more specific vintage-oriented public, now we also have people from everywhere, it has become broader. The style has changed also, first it was flower prints, now it looks more modern. The style of presenting clothing and pictures has changed also. It has become more mainstream and normal to buy second hand, which is positive for sustainability reasons. One of the negative results of the generalisation is that people do not exactly know what vintage means and so they use it as a marketplace instead, because they think it is just for second hand stuff.

I think our group mainly has people that are interested in vintage, mainly women between 18-35 years old. People that buy from me (vintage furniture) tend to have more money to spent and are a little bit older.

ML: What can you say about the Dutch consumer attitude towards sustainable clothing consumption?

MU: I think the main part of the Dutch public is not concerned with sustainability in their clothing. I think it is only a small percentage that is caring about it, because they want to do something for the environment.

In our group sometimes, somebody specifically asks for vintage because they do not want to purchase anything new anymore, only second hand.

Probably people are not so much concerned with sustainability in their clothing because they don't know and don't want to know.

On the other hand, you can see the vintage market is growing very much, for example the vintage per kilo sales, where you can still purchase large amounts of clothing for low prices. I think this is mostly young people, under 25 years old, but you also want older people to get involved.

ML: How do you envision sustainable textiles consumption? (what should consumers buy, how should they decide what clothing to buy, how can they care better for their clothing or give it a better reuse)

MU: I think it is better to buy something sustainable than something second hand. I still think some second hand or vintage garments are bit unhygienic, I do pay attention to who sells it, although it is general clean. If you bring it beautifully through your image and style, this helps enormously to improve the image of used clothing. This especially helps to encourage youngsters to buy second hand clothing.

ML: What do you think is currently holding them back from consuming sustainably?

MU: I think it will not work to get the biggest part of the society to buy sustainably. Our time is against these initiatives, we want new things, new impulses, you see it on social media and I can notice it in myself as well.

Primark and H&M are doing very good business currently, if somebody can choose how much they can buy for their money, they prefer to have 10 shirts for 100 euro instead of only 1 or 2.

I think this is embedded in our current society, we want new things. If you can buy and sell on UW however, you can earn back your money from used clothing and buy something new for yourself, it is not making us conscious about clothing however.

Reuse of clothing is good, but not necessarily sustainable, it works so well because if you are young and have not much money, you can earn back your money, which is not sustainable per say.

ML: What can motivate the Dutch consumer to consume more sustainably?

MU: I think we need sustainable production of clothing. Patagonia for example produces sustainably, its new clothing, those initiatives can help people to buy sustainable clothing, we need more brands like that, I think (Uiterwaal, 2019).

Interview Project Cece - Veenhoven

Date: 23-04-2019

Interview type: physical interview

Interviewer: Mayte Leinenga (ML)

Interviewee: Noor Veenhoven (NV)

ML: Can you introduce the company that you are working for and what their link to sustainability in clothing is?

NV: Project Cece is a website that collects about 140 sustainable and fair fashion brands and is available in the Netherlands, and now also Germany and the UK. We started as three students that were looking for sustainable clothing and noticed we could not find it easily. We had some lists, but each website only had 10-20 items, when you were looking for something specific, you could not find it easily with these lists. Together we saw potential to build a website that could show all the sustainable fashion brands together. In 2016 we launched our website, the first year the service was free for the brands that were on the website. After that first year we used a business model where we own money when a purchase is made through our website that links to the sustainable brands, we are an intermediary website to link to sustainable clothing brands. We also got some funding form the Amsterdam investment fund, allowing for us to earn some salary and to quit our regular jobs to fully focus on the website.

ML: What are your ambitions when it comes to sustainable clothing consumption?

NV: We aim to make sustainable fashion the norm, our goal is rather ambitious, but we would like to have 5% of the Dutch clothing market and finally also Europe. If this is possible, this shows that there is a shift and then industry will have to act. In the end we would like to see that the website is not necessary anymore, because every clothing brand should have sustainable and fair clothing. We would like to be the largest website that collects sustainable clothing brands in Europe.

ML: How does Project Cece encourage consumers to make more sustainable choices?

NV: We think that it should be normal to buy only sustainable and fair clothing, this is why we offer information and try to make consumers aware about clothing sustainability. We offer transparency about where the clothing is from, what fibres are used, what labels it has. We are also open for questions from consumers and publish some news articles and share tips.

ML: How do you characterise the consumers active on Project Cece?

NV: Our website is mainly for the group of consumers that would like to start acting towards sustainability, but whom are still facing some difficulties. The consumer that is already purchasing sustainable clothing also uses the website, but generally they already have sufficient knowledge and preferred brands that they do not need much help. We want to remove the threshold for the group that is open to start purchasing sustainable clothing. It should be easy for them to find sustainable brands, in different price ranges also. We notice that consumers experience difficulties because it takes effort in order to start consuming differently, it takes more time and awareness, consumers tend to use excuses.

Consumers start to know us more, we have become an authority in the field of sustainable clothing.

ML: What can you say about the Dutch consumer attitude towards sustainable clothing consumption?

NV: We start to see a trend where Dutch consumers express they care about sustainability, the will is there, however, many excuses are made not to act. One popular misconception is that consumers think sustainable clothing is always expensive. When they visit our website and see some expensive

items, they tend to only see this and look no further. In reality there is a range of different price ranges. This is also where we notice we have to make it easy for the consumers, we try to do this by enabling them to sort clothing based on price for example. The items may sometimes be more expensive, but this could be because the brands only produce in small collections or because the brand makes designer clothing. We ourselves are students and do not earn a lot of money but still chose to consume sustainably. Another option is also to simply consume less. We also sometimes see that consumers do not like the style of the brands, we would of course like to have many more brands to be able to offer more styles.

ML: How do you envision sustainable textiles consumption? (what should consumers buy, how should they decide what clothing to buy, how can they care better for their clothing or give it a better reuse)

NV: We would like to see that consumers know what they are purchasing, that they know the background story and also that they truly care about this.

It is better not to purchase to many new clothes. I cannot put a number on the items that a consumer could sustainably own and wear. However, one simple rule in deciding whether to purchase an item or not, is to think consciously whether you would wear the item 50 times. If you are looking for something for a special occasion, it may be better to rent or lease it, this should be the norm. Clothing is not meant to only be worn once. If you are finished with clothing, it is best to resell it where possible or at least to donate it to a clothing bank, throwing away is always the last option.

I am not a fan of Instagram influencers that only wear outfits once. Wardrobe management is not always key to sustainable textiles consumption, because it is sometimes only a trend. Also, when someone cleans out their closet and next they simply throw away the unwanted clothing items, this is not sustainable behaviour. Sometimes you also see that after a few moments after the cleaning up, the person simply goes back to buying new items, since they want to have more choice.

ML: Do you think the Dutch consumer is ready to consume sustainably by consuming less and making better choices regarding clothing?

NV: Yes, they are at the tipping point, they simply need another 'kick'. We can see sustainability is a hot topic at the moment, it starts to become a symbol of status among higher educated consumers. The image of boring old fashioned eco fashion starts to fade, now people still have to make the step themselves. In many aspects we can already see that Dutch consumers start to adapt to a more sustainable diet for example. But in the case of fashion they are not yet acting much. It is also because you are not confronted much with sustainable choices in clothing as much as you see in with food in supermarkets.

Consumers start to acknowledge us more as a sustainable clothing authority and we can see that consumers reach us more when there is a programme on Dutch television about clothing unsustainability or when a disaster in the fashion sector is broadcasted on the news. This is also where we can assist our audience in the help they need to make sustainable choices in clothing.

ML: What do you think is currently holding them back from consuming sustainably?

NV: As mentioned before consumers tend to make a lot of excuses for themselves not to consume sustainably, for example they think it is expensive and so it does not fit their budget, where in reality there is a wider price range available. Also, the confrontation is not that present as in other product categories.

ML: What can motivate the Dutch consumer to consume more sustainably?

NV: It takes the consumers a few times to get used to shop sustainably and to trust it. The thing about sustainable clothing that is motivating is that it has good story, something that you can tell your peers when they ask or complement your clothing. It is much more fulfilling to tell a story about fair clothing, compared to clothing that is produced that harms both environment and people.

We try to help our audience by spreading information and awareness and by adapting to their needs. If we do not listen to the audience, they will not see their potential impact and then they will not change their attitude. We try to spread awareness about their impact by consuming fashion as they do and to show it really makes a big change. You can see this through the ecological footprint, which is really important because the impact is not that tactile and seems far away. We are also present at information stands such as at Revolution Fashion Week, we also spread information through our social media channels. We want to encourage them and lower the threshold to consume textiles sustainably and fair (Veenhoven, 2019).

Interview United Wardrobe - Verheul
Date: 30-04-2019

Interview type: phone interview

Interviewer: Mayte Leinenga (ML)

Interviewee: Thijs Verheul (TV)

ML: Can you introduce the company that you are working for and what their link to sustainability in clothing is?

TV: United Wardrobe exists for 5 years now and we are the largest sustainable fashion platform in the Netherlands. We sell the highest volume sustainable clothing in the Netherlands, our clothing is sustainable since it is second hand and does not have to produced. It does have to be send to the buyer via mail, but we use UPS pick-up points which allows us to charge lower shipping rates as well as less GHG emissions, since there is no vehicle delivering the packages to houses.

Me and a friend were studying and interested in sustainability. My friends' sisters always had trouble to sell their second-hand items through for example Marktplaats, because they would be extorted online, and selling at second hand markets tend to be messy. Then we decided to create a platform where you can make an account, follow sellers and come together there. Then we did not know how it would end, this is 5 years ago, now we are the largest second-hand selling platform in the Netherlands and we are also active in France now. We continue to battle for our mission, namely to make second hand clothing the norm, we see a world where it is not necessary to purchase new clothing and where you can easily sell your clothing. Before it used to be a bit harder to sell them, since on Markplaats you had to make advertisements, you converse with strangers, you had to pay cash. We noticed that for example 'ticket swap' was very popular among students and we thought we needed to combine ticket swap, Marktplaats and Instagram by creating the United Wardrobe platform. It worked, it took a lot of time to gain the trust of the Dutch consumer, but now we have it, we can say we have a large impact, namely on the young woman consumer, who used to go to H&M and Zara to buy cheap apparel. At our platform they now buy second hand clothing for low prices.

ML: How do you characterise your customers? (are they specifically sustainability-oriented)

TV: We do a lot of customer research among our customers, we see a large group of young females aging from 16 to 24 years old. They tend to be very fashion clothing involved and study fashion related studies as well as other studies. 80% of this group in the Netherlands is a registered user of our platform. They have two main reasons to use our platform, namely on one side, a sustainable wardrobe and to make others happy with their items. It starts with too much clothing and they like to earn some pocket money, many of them are students.

ML: How do you encourage consumers to make more sustainable choices?

TV: Our goal is mainly to create a platform that enables consumers to not have to go to Zara and H&M anymore, they can buy a lot for a low amount of money. We are not competitors of Marktplaats. We have more clothing online than Marktplaats. We rather see H&M, Zara and Primark as our competitors, this is where our customers go to, to buy a lot for a low amount of money. When we ask these girls if they are ashamed, they simply say they cannot find so many clothes fur such a low amount of money, and this is why they buy it. Since we now have such a large range of products, we can provide each customer with something of their taste, something specific even or in their price range, plus you can order it online.

At out platform we sell a lot of second-hand cheap apparel such as H&M and Zara, but our opinion is that it is better not to burn any clothing items, but rather to reuse it by reselling it. It is already produced, so it is better to make someone happy with the items. These items are also the most sold items on the platform.

We do not specifically encourage our customers to buy more qualitative items, since we are data driven and we steer on their preferences, seasons etc. For us it is the most important that our sellers can sell their items, this is what we enable by using filters such as size, price range. We make recommendations based on their preferences. Our main point is to allow our sellers to sell all their items through the platform. We help them shape their prices by a tool. We have a lot of data which means we make a selection for our customers, we do this to enable that there is a nice shopping experience.

ML: What can you say about the Dutch consumer attitude towards sustainable clothing consumption?

TV: Before people were hesitant about buying second hand clothing, they thought it would be not hygienical and would be a lot of trouble. We did not know it would be possible to connect all of these wardrobes together, but we did connect them. Now people know they can choose the items they want, for example red doctor martens in size 37, but second hand, also in a lot of different budgets. We made it easy for them.

ML: How do you envision sustainable textiles consumption?

TV: We would like to see that our customers, when they decide that they need something for example for a specific season, that they firstly look at our platform to check whether something of their taste is available. We cannot make a big change to the fast fashion system, but what we can do is offer an alternative to this system. We want them

The main way that consumers reach us, is by word of mouth when a friend or family member tells them about their experience on united wardrobe. We also work with large Dutch influencers, whom we help with wardrobe management. They call me when they need help when their wardrobe starts to become too stuffed with items. We send a trainee to pick up the unwanted clothing. The influencer then makes a post on Instagram showing they cleaned up their closed with the help of

United Wardrobe. We also try to communicate our message through radio and I sometimes give colleges in Amsterdam, Wageningen and Groningen where I spread our story and its goal.

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