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REPORT

**Survey Results on Fashion
Consumption and Sustainability
among Young Swedes**

MISTRA FUTURE FASHION

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Illustration: Emma Cowlam

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on Survey Results on Fashion Consumption and Sustainability among Young Swedes

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Project 7: Sustainable Consumption and Consumer Behaviour

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Executive summary

Executive summary

Sustainable choices and behaviours are becoming ever more important in our daily lives in all consumption domains. This report focuses specifically on the consumption of textile fashion of young Swedish consumers.

The purpose of this report is twofold:

a) To describe current fashion consumption of young consumers and sustainability related attitudes and knowledge and

b) to compare attitudes, knowledge and behaviour between consumers with different levels of awareness and commitment towards sustainability. The survey was conducted among 1,175 young Swedish consumers (aged 16-30) in 2012. The average age of respondents is 23.5 years, with 48.7% females and 51.3% males.

The report focuses on three consumption phases: purchase (including pre-purchase), use & maintenance and discarding.

In the purchase phase, the average consumer spends around 2.5 hours per shopping trip – mostly in shopping malls – and the average monthly expenditures amount to 687 SEK. Price and price/quality relationship matters to the young consumer and women do pay more attention to this relationship than men do. Men do, however, care more about what the purchase tells about their success, i.e., how well they are doing in life. The average consumer does also have high environmental and social awareness but that awareness does not always translate into actual purchase based on environmental impact.

Purchase phase:

- Average shopping trip takes 2.5 hours
- Average consumer prefers shopping malls
- Average monthly expenditures about 687 SEK
- Price & price/quality relationship matters, primarily for women
- Sign value of clothing, importance of purchases as reflections of success, primarily for men
- Average consumer has high environmental & social awareness
- Gap between awareness and actual purchase behaviour

The use and maintenance phase focuses mainly on which method the young consumers use in cleaning, as well as, repairing their clothes. According to the survey, almost all young Swedish consumers have access to and regularly use a washing machine. On average, they also use tumble dryer and

Executive summary

flat iron more than once a month. Approximately 60% claim to mend their clothes often or sometimes which seems to depict a mind-set of not unconditionally buying into a throwaway consumer mentality.

Use & maintenance phase:

- Majority uses a washing machine regularly
- Tumble dryer & flat iron are used more than once a month
- Approx. 29.3% claim repairing clothes often or always

The discarding phase comprises attitudes of consumers towards recycling/discarding, channels frequently used for discarding and motives of discarding of clothes. Despite the high awareness of environmental and social issues in the purchasing process, this awareness does not seem to translate into the discarding phase. When it comes to the disposal of clothes, the average consumer has positive attitudes towards donating his/her clothes and usually passes the clothes on to family or friends or donates them to charity. The survey identified gender differences in terms of attitudes towards the recycling process: whereas women were more positive towards the recycling process, men found the process more of a hassle and/or were disinterested in it.

Discarding phase:

- Existing environmental/social concerns do not translate into clothing discarding
- Average consumer has positive donating attitudes
- Most popular disposal form is passing on to family/friends or charity donations
- Men perceive recycling more of an inconvenience/hassle

Lastly, the survey presents an alternative approach to consumer segmentation through the concept of “Stages of Change”, which divides consumers into four groups to gain insight into their awareness, knowledge and action regarding sustainable consumption. These four stages are (1) Pre-contemplators, i.e., those who have no intention to change their behaviour; (2) Contemplators, i.e., those who are aware of the problem but have not made the commitment to change; (3) Preparation group, i.e., those who intend to take action when it is convenient and who have already made some efforts to do so; (4) Action & Maintenance group, i.e., those who have modified their behaviour and environment to fulfil their commitment and work towards maintaining that commitment. About 5.5% of young Swedish consumers can be categorized to fall into this highly reflective and engaged group.

Executive summary

The group's members are highly environmentally and socially aware in their purchases and prefer second hand outlets to malls. The Action & Maintenance group disposes clothes most often by using methods such as resell and reuse, e.g., consignment shops, passing on to family, donating to charity and modifying. The members of this group demonstrate that consuming sustainably does not mean you have to give up being fashionable and compromise on your individuality.

Stages of Change:

- The Action & Maintenance group, i.e. consumers with exceptionally high levels of awareness, knowledge & action regarding sustainable consumption are equal to all other groups with regard to socio-demographics
- 5.5% of young Swedes are members of the Action & Maintenance group (4)
- Members of the Action & Maintenance group (4) prefer shopping second hand outlets
- Most popular disposal form of the Action & Maintenance group (4) are reuse, resell, charity & modifying
- Interestingly enough, their washing behaviour does not differ from the other groups



Chapter 1 & 2

introduction & reading instructions

Chapter 1 – Introduction

1. Introduction

Young Swedish consumers are environmentally aware and sometimes consider environmental impacts of the textile production when purchasing clothes; however, these considerations do not necessarily translate into action. The sustainability factor might therefore be valued less than the factor of price, price/quality relationship or personal fit. This is not an uncommon finding and not special to young consumers – we find similar attitude-behaviour gaps across consumer groups and across product categories (not only fashion, but also food, housing and transport) (e.g., Faber et al., 2012).

This gap in attitude and behaviour becomes apparent across different consumption phases: purchase, use & maintenance and discarding. The young consumers' high environmental awareness does not translate into action around sustainable purchasing, using and discarding of clothes. This report presents findings from a survey on young Swedish consumers' fashion consumption and sustainable behaviours. The purpose of this consumer survey is to

- a) Describe current fashion consumption behaviour, attitudes, motivation and other personal factors related to fashion consumption. To date, only a few large-scale, representative studies that look into fashion consumption in relation to sustainability have been conducted and published. The findings thus shed some light on how young Swedish consumers purchase, use & maintain and discard of their clothes.
- b) Identify consumers who already consume fashion in a sustainable way. This report focusses on who these consumers are and what differentiates them from less aware consumers. These comparisons will be carried out along three consumption phases: purchase (including pre-purchase), use & maintenance and discarding.

Data was collected in spring 2012 resulting in a sample of 1,175 young consumers aged 16–30 years in Sweden. It provides a rich data set on internal factors influencing (sustainable) fashion consumption, mainly: knowledge, attitudes, available resources such as time and money, lifestyle factors, motivations, social norms and other personal characteristics.

The report is organized as follows: First, it provides some background on existing definitions on sustainable fashion consumption as well as young consumers in relation to sustainable fashion consumption. The main part of this report presents findings of the young consumers' fashion consumption throughout the three main consumption phases. The final part of the

Chapter 1 – Introduction

report compares consumers by segmentation, i.e. four groups starting from consumers who are not at all interested in sustainable fashion consumption to very committed consumers.

The survey aims to gain an understanding of how young consumers think and act in their clothes purchasing, use & maintenance and disposal processes. In particular, it wants to identify which barriers are considered most challenging to overcome and which drivers are a key to promote sustainable fashion consumption.

Chapter 2 – Reading instructions

2. Reading instructions

The reading instructions are intended to guide the reader through the report.

Chapter 3 and 4 cover definitions of the terms “sustainable consumption”, “fashion consumption”, “sustainable fashion consumption” as well as definitions on “young consumers” and “young consumers and sustainable fashion consumption”. Additionally, some background literature is presented. These chapters provide some background on how key aspects have been defined as well as on how these different terms fit together.

Chapter 5 describes the questionnaire development, the field work as well as the resulting sample.

Chapters 6, 7 and 8 present findings along the consumption phases: purchase phase (Chapter 6), use & maintenance phase (Chapter 7) and discarding phase (Chapter 8).

Each of these three chapters is structured in a similar way: It starts with an introduction to the respective consumption phase and a tabular overview of relevant and measured topics. Then, each topic within one consumption phase is put in focus: We present the background, and the relevance of the issue, which is followed by an introduction to the actual measurement of the topic and finally the results. Chapters 6, 7 and 8 each conclude with a summary of the respective findings.

Chapter 9 compares different consumer segments grouped along their awareness, knowledge and commitment towards sustainable fashion consumption. The chapter is structured differently as the previous three chapters: It first introduces the consumer segmentation concept “Stages of Change”, which is an alternative approach to consumer segmentation that goes beyond the usual socio-graphic factors. Consumer segments are then compared along the consumption phases, looking especially at the topics presented in the three previous chapters.

The last part of this report presents a summary of the whole report (**Chapter 10**).

Some information on **methodology** will ease the reader to better understand and evaluate the results presented in this report:

If possible and available, we employed validated scales to measure the various topics used in the survey. An overview of employed scales is presented

Chapter 2 – Reading instructions

in the beginning of each chapter, the sources are provided in the Appendix. In some cases, existing, validated scales had to be adjusted to context and time requirements. These changes are addressed in the respective chapters, where these scales come into play. If not indicated otherwise, the answer scales for these scales are Likert-scales ranging from 1 'completely disagree' to 5 'completely agree'.

The findings are presented by the mean, the standard deviation as well as the minimum and maximum. The mean represents just the average, for example, the average age of respondents. The standard deviation (SD) tells how much respondents deviate from the mean (i.e., is there a wide variety of answers or do respondents rather agree). The minimum and maximum provide the lowest and the highest answer category in the sample. This gives an orientation for interpreting the mean and the standard deviation.

Additionally, we carried out group comparisons. In Chapter 6, 7 and 8, we compared behaviour, attitudes, motivation and other personal factors by sex and in Chapter 9, we compare consumer segments that differ in their commitment to sustainable fashion consumption. Statistical testing was carried out depending on the nature of the data, including t-test, non-parametric testing as well as analysis of variance (ANOVA). Differences are only reported when statistically significant.



TED's H&M field research, Stockholm (2012), photography by TED

Chapter 3

sustainable fashion consumption: a working definition

Chapter 3 – Sustainable fashion consumption: a working definition

3. Sustainable Fashion Consumption: a working definition

Sustainable consumption – A general understanding

Examining fashion consumption from a sustainability perspective requires some explanation of the concepts as we used them. Sustainable consumption, fashion consumption as well as sustainable fashion consumption has been subject to myriad meanings and interpretations (Schaefer & Crane, 2005).

The term ‘sustainable consumption’ – defined as ‘meeting the needs of the present without compromising the ability of future generations to meet their own needs’ (Brundlandt and the World Commission on environment and Development, 1987) – first entered international policy and research on Agenda 21, the action plan for sustainable development adopted at the 1992 Rio Earth Summit. Although conceived as a pluralistic concept, at its core were the notions of more efficiently produced goods and a ‘green’ and ‘ethical’ consumer who in making consumption decisions serves as the driving force of a market transformation that incorporates both social and environmental concerns (Seyfang, 2011).

Later discourses expanded this basic framework to include consistency (McDonough & Braungart, 2002), the production of goods with materials that can be fully re-used, composted, or recycled; and sufficiency (Reisch, 2003), ‘living better with less’.

Sustainable consumption also comprises terms such as anti- or reduced consumption which have also been studied within movements such as voluntary simplicity, asceticism, constrained consumption, downshifting, and non-materialism (Cherrier, 2009; Black & Cherrier, 2010). Collaborative consumption, sharing, bartering, lending are other concepts used in this regard (e.g. Botsman & Rogers, 2010)

Closely related to anti-consumption is consumption rejection, acts of boycott or protest aimed at enacting change in the marketplace. Such complexity is not lost on consumers, many of whom have adopted their own definitions of conscious consumer behaviour amidst the confusion and contradictions (Moisander, 2007).

Fashion consumption - Defined

A term nebulous in its definition, we distinguish “fashion” from “clothing” in that fashion goes beyond providing protection or simply canvassing the body – it is an expression of the self, a form of communication between the

Chapter 3 – Sustainable fashion consumption: a working definition

self and others and a way of expressing lifestyle and values that one lives or aspires to.

Niinimäki (2010), distinguishes between clothes and fashion by saying that fashion is “symbolic production”. As a concept it differs from clothing, which is a material production and something that fulfils our physical needs for protection and functionality. Fashion merges us with our emotional needs; it expresses our inner individual personality by external marks and symbols, brands and status items.

Crane and Bovone (2006) suggest that the term “fashion” has a variety of meanings for both academics and the general public but it is most frequently used to connote highly visible styles of clothing and less often, other types of material or immaterial culture that is highly valued at a particular moment in time.

Solomon and Rabolt (2004) simply state, fashion refers to a style that is accepted by a large group of people at a given time. It acts as a symbolic innovation, a reflection of our society and a reflection of how people define themselves.

Therefore, fashion consumption can be defined as the use of clothing for purposes beyond utilitarian needs. It is a consumption activity that is a part of one’s identity-making process and provides symbolic, immaterial and hedonistic value to the consumer beyond the needs based on the benefits a simple garment might offer (Dobers & Strannegård, 2005). Fashion consumption can be theorized as an ongoing process in which people engage in to consume an idea, a symbol, construct a lifestyle and identities, and achieve well-being (Meyer, 2001; Peattie, 2001).

While the consumption of products other than fashion might also fulfil functions beyond the physical need level, fashion takes a special role, as it provides a “second skin”, an extension of the self that communicates to others (Belk, 1988). Breaking the process of fashion consumption down into its smallest pieces, they include everything from need reflection, purchasing discovery and search, to purchase or other forms of procurement (e.g. self-made, swap), use, maintenance, elimination, discarding or recycling of the garment.

Sustainable fashion consumption – Defined

There is, according to Thomas (2008, p.525-526) confusion in the sustainable fashion lexicon: “Environmental, ecological, green, sustainable, ethical, recycled, organic, and inclusive (universal) fashion and fashion design, as terms, co-exist, cross-fertilize, and are readily confused”. Thomas (ibid.)

Chapter 3 – Sustainable fashion consumption: a working definition

suggests that this confusion allows for sensational usage, misuse of terms and a break between what is communicated in scholarly discourse and newspapers and magazines. Ultimately, consumers are systematically left in the dark, confused by a smokescreen of ever new, trendy terms. For instance, “Ecofashion is a word that currently attracts the fashion industry and the related areas of marketing, merchandising, and journalism” (Thomas, 2008, p.531). Taking a closer look at what eco-fashion actually means, Niinimäki (2010, p.152) offers the following definition: “Clothing that is designed for long lifetime use; it is produced in an ethical production system, perhaps even locally; it causes little or no environmental impact and makes use of eco-labelled or recycled materials”. Hence, somebody who actively consumes “eco-fashion” would pay attention to the material usage, the environmental impact created by the garment throughout its lifecycle, and ethical issues regarding its manufacturing (Joergens, 2006).

This plethora of terms and their interchangeable use is not unproblematic. As Thomas (2008) argues, these terms are imprecise and lack reference. For instance, Thomas (ibid.) suggests eco-fashion as term to be regularly used because it is non-judgmental and a nonfactual approximation, providing consumers with a feeling without actual information about what aspect of the clothing is “eco”.

Thomas (ibid.) suggests that in the fashion discourse “sustainable consumption” has been used more by academic theorists than by the press or fashion industry. However, over the course of the last few years, press and industry have increasingly taken up the sustainability discourse. Most recently, the joint efforts by the Danish Fashion Institute and BSR’s NICE Consumer project were presented to the public (Eder-Hansen et al., 2012).

The NICE Consumer projects’ working definition of sustainable fashion consumption takes its departure in the definition from the Oslo Roundtable on Sustainable Production and Consumption (Norwegian Ministry of the Environment, 1994): Sustainable fashion consumption can be defined as “the use of clothing for purposes beyond utilitarian needs, including “identity making”, which is achieved without jeopardizing the ability of future generations to meet their needs” (Eder-Hansen et al., 2012, p.11). Furthermore, “sustainable fashion consumption is a sub-set of the sustainable fashion system. It includes consumer attitudes and behaviours that lead to reductions in the triple-bottom line (economic, environment and social) impacts of buying, wearing, caring for, repairing and recycling fashion goods. It includes demanding sustainable alternatives, caring for garments in less impact intensive ways (e.g. cold wash and line drying clothes) and responsible disposal or recycling of obsolete goods” (ibid.).



Chapter 4

young consumers & sustainable fashion consumption

Chapter 4 – Young consumers & sustainable fashion consumption

4. Young consumers & sustainable fashion consumption

Young consumers: Defined

According to the “Golden Age of Youth” study, conducted in 2008 by Viacom Brand Solutions International (VBSI) with 25,000 respondents aged 16-46 years in 18 countries (VIACOM Brand Solutions, 2012), consumers can be considered to stay physically and mentally younger for longer. As lifestyle choices and spending power have blurred the boundaries between traditional target groups, demarcations that focus on consumers’ involvement and participation in youth culture might prove to be more fruitful than definitions solely based on consumers’ demographic information.

Young consumers: Key to the development of sustainable consumption patterns

In consumer societies, private consumption of households causes a substantial part of the environmental and social costs of production (Hume, 2010). With higher levels of affluence and lower levels of responsibility for necessary purchases, the available income and hence purchasing power of young consumers (19 to 30 years) has increased considerably in the last decades (Brusdal & Langeby, 2001). Higher levels of personal and financial freedom significantly contribute to less carefully reflected consumption. Additionally, learned consumption habits in young age are most likely to be kept and extended over the lifecycle. Thus, young consumers become one of the relevant target groups to alter behaviour towards more sustainable consumption.

Yet, at the same time, young consumers have substantial potential of being the key dynamic driving force for the development towards more sustainable consumption patterns (Fien et al., 2008; Hume, 2010). As Fien and colleagues (2008) claim, young people constitute a distinct consumer group which, on the one hand, is subject to the fast changes of contemporary consumer culture, and on the other hand, is characterized by enormous potential to act as agent of change.

One reason is that young consumers appear to be more open to change and get inspired by emerging ideas, which can to some extent be explained by a freedom from responsibility, due to longer education, later entry into the workforce, and postponement of starting a family (Brusdal & Langeby, 2001; Fien et al., 2008). Secondly, with the traditional flow of learning being reversed, knowledge is no longer only passed on from the older to the younger generation. In some areas, the adult generation receives important input from the younger ones. Thus, transferring ideas to and critically question-

Chapter 4 – Young consumers & sustainable fashion consumption

ning the conduct of the older generation, young adults have the ability to influence (directly or indirectly) household consumption substantially. And thirdly, more importantly, the consumption patterns that people develop at an early stage will provide the basis for their consumer behaviour in subsequent phases of their lives. Ultimately, it can be assumed that behavioural change of today's young generation will set the stage for future generations (Fien et al., 2008).

Based on the findings of a large study conducted with young people (age 18-25) in 24 countries in 2000 on behalf of UNEP and UNESCO, three socio-psychological factors were identified by Nyberg and Stø (2001) that form the basis for young people's potential of being key agents in promoting a change towards sustainable consumption patterns: high concerns for protecting the environment, the ability to create trends, and the skilled use of new media.

Thus, it can be concluded that despite their consumption style being to a large extent influenced by identification with pop-culture, role models, peers, as well as mass media and marketing, young people in developed countries have vast potential to bring about change (Fien et al., 2008). Nonetheless, the potential impact of young people on adopting more sustainable consumption patterns is often neglected, by researchers and policy-makers alike (ibid.). Considering the fact that young people under the age of 25 comprise almost half of the world's population (World Population Foundation, 2011), with approximately 15% living in the developed countries, understanding the consumer behaviour of this group is of utmost importance.

Young consumers and sustainable fashion consumption

With the rise of fast-fashion suppliers, shorter fashion life cycles and increased availability of low-priced clothing items, a throwaway fashion attitude is growing among consumers with clothing items being discarded after rarely being worn (Birtwistle & Moore, 2007; Morgan & Birtwistle, 2009). Especially young consumers, who are more fashion-oriented and purchase more fast-fashion items than other consumer groups in order to keep up with the latest trends, are more prone to follow this trend (Birtwistle & Moore, 2007). According to Kim and Damhorst (1998), young consumers who are environmentally concerned express an interest in and claim to be willing to pay more for environmentally friendly apparel. However, while concerns found to be high, this rarely translates into environmentally responsible apparel consumption behaviour – just like in any other age group. Different internal and environmental factors can be identified that support or hinder consumers to live up to their own intentions and might thus help explain the "attitude-behaviour gap".



TED's 'Tell Us About Your Clothes', Parade, Chelsea College of Art (2010), photography by TED

Chapter 5

the survey

Chapter 5 – The survey

5. The Survey

Questionnaire development

The questionnaire consisted of two parts: one addressing more general fashion consumption, the other part focusing on sustainable fashion consumption. Questions covered internal factors to consumers such as knowledge, attitudes, existing resources (e. g. time and money), lifestyle factors, motivations, social norms and other personal characteristics influencing (sustainable) fashion consumption as well as external factors, e.g. the perception of availability, affordability and accessibility of sustainable clothing alternatives.

The questionnaire was developed in English. After a group of experts reviewed the first draft, necessary changes were made. The two parts of the survey were pretested two times at Copenhagen Business School in December 2011 and January 2012 with a sample size of 15 participants each time representing the target group. The pre-tests did not lead to further adjustments and therefore the questionnaire was translated into Swedish. Back-translation into English as well as a pilot test at Stockholm School of Economics, guaranteed applicability of the questionnaires in a Swedish context. No further changes were necessary. Finally, GfK Sweden made a language double check and a final quality test before carrying out the field work.

Data collection

The target group of the study are Swedish consumers aged 16 to 30 years. The sample is representative for this age group regarding age, sex, region and education. 1,175 consumers participated in the survey and answered both parts of the questionnaire between 19th March and 13th April 2012.

Between answering the two parts, respondents had a two weeks' break. Each part took about 20 to 30 minutes to be answered.

A sensitivity analysis of the data was carried out. The sample size did not need to be adjusted since there were no missing values or non-applicable answers.

The sample

In this section, we describe briefly the socio-demographics of the sample. The average age of the 1,175 respondents is 23.5 years (Min = 16, Max = 30). The sex distribution is 51.3% men and 48.7% women.

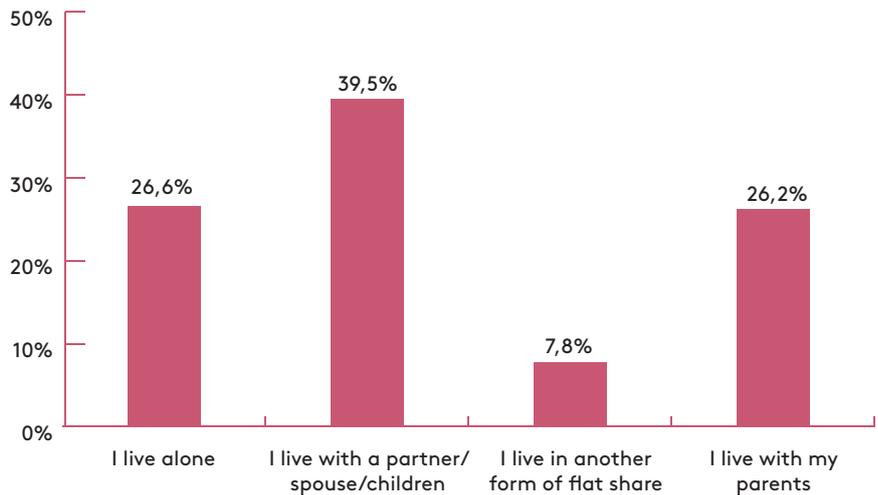
Chapter 5 – The survey

The living situation of the respondents is diverse: 39.5% live with partner/spouse and/or children, 26.6% live alone and 26.2% with their parents (Figure 1). Around 35.0% live in urban areas, i.e. in Stockholm, Gothenburg or Malmö.

The educational background within the sample is 42.0% with high school/secondary school, followed by 23.3% university or school of higher education (without a degree yet) and 22.2% university or school of higher education (without a degree yet) (graduated) and about 12.4% have a 9-year compulsory school degree. Regarding occupation, approximately 32.5% of the sample has a full-time employment, 12.2% are part-time employed and only 5.8% are unemployed. The majority of respondents is still in education (48.0%).

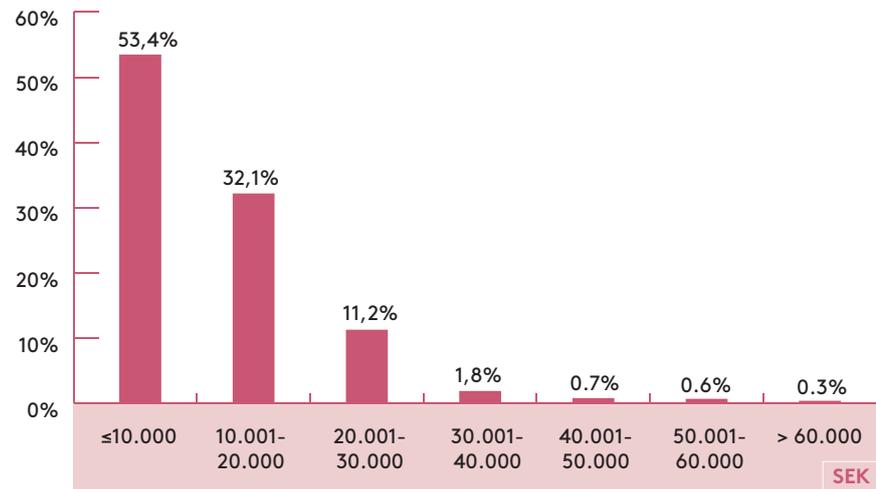
The majority (53.4%) has a disposable income (after deduction of taxes) between 0 and 10,000 SEK per month (Figure 2). This can be explained by the high number of respondents who are still in education. The distribution across the seven income categories is depicted in Figure 2. 8.2% of respondents refused to provide information on their income.

Figure 1 Household composition



Chapter 5 – The survey

Figure 2: Monthly disposable income





Chapter 6

the purchase phase

6. The purchase phase

This chapter covers one of the early stages of consumption, namely the purchase phase of sustainable fashion consumption. Here, we cover self-reported fashion-related purchase behaviour as well as factors influencing consumers' decision-making.

Research focusing on environmentally-conscious fashion acquisition suggests that only few consumers actually take environmental concerns into account when shopping for clothes, despite their proclaimed pro-environmental attitudes (Kim & Damhorst, 1998). Including environmental and/or social concerns into the purchasing decision adds to the complexity of the decision making process. Similarly, Butler and Francis (1997) suggest that product attributes such as style, fit, or price might outweigh sustainability aspects.

Similar findings were reported by Niinimäki (2010) who argues that sustainable aspects of clothes only add value and might tip the scale in favour of the sustainable alternative in cases where the product in question already fulfils all general requirements, i.e., price, style, colour, fit, and quality. Nonetheless, with higher levels of knowledge and understanding of the environmental and social impact of fashion products, consumers' engagement in pro-environmental/social clothing purchasing increases (Hustvedt & Dickson, 2009; Stephens, 1985).

Sustainable fashion consumption can be performed in many ways for those consumers who do in fact take environmental/social considerations into account in their purchasing behaviour. The most frequent forms identified by research are attribute-focused acquisitions, patronage of certain types of shops, and limiting the amount of clothes acquired.

The survey's topics/measurements scales in the purchase phase including their meaning are listed in Table 1 (sources provided in the Appendix). Each of these concepts will be discussed in detail on the following pages.

Chapter 6 – The purchase phase

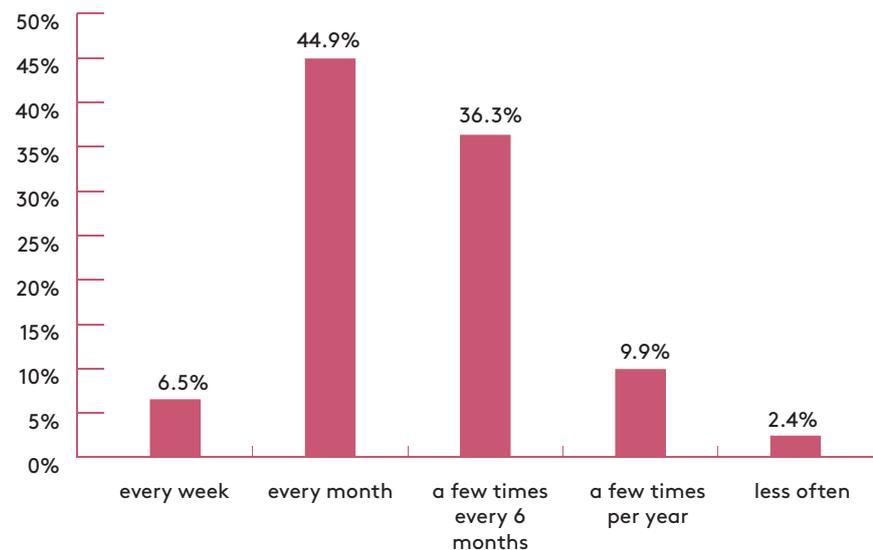
Table 1: Purchase phase – overview of concept and meaning

Topics/measurement scales	Meaning
Reported purchasing behaviour:	
Time spent for shopping	Self-reported hours per week spent shopping clothes (on average)
Expenditures for clothing	Monthly spending on clothing (on average)
Number of items bought	Monthly clothing items bought (on average)
Shopping frequency	Frequency of shopping clothing
Mode of acquisition	Frequency of diverse modes of acquisition used
Role of price & price/quality relation	Understanding how price and price vs. quality affect purchase decisions.
Materialistic versus post-materialistic values	Importance of materialistic values in purchasing clothes
Hedonic and utilitarian shopping values	Consumers view shopping either as work or fun
Involvement with clothes	Understanding the importance of fashion and clothes for consumers
Functions of clothing	Functions of clothing – understanding how consumers choose their clothing
Opinion leader (OL) and opinion seeker (OS)	OL: consumers with above average interest and influence in fashion OS: Consumers who seek advice and inspiration from others in fashion
General environmental and/or social impact awareness:	
Environmental concern	Consumers personal environmental concern
Environmental/social concerns in purchasing decisions	How often do consumers think about environmental/social implications when purchasing clothes?
Environmental apparel knowledge	Purchase of environmentally friendly clothing
Perceived availability, accessibility and affordability of sustainable clothing	A barrier to sustainable trade is the consumer's view that products are unavailable, inaccessible or too expensive
Label knowledge and usage	Consumer knowledge and use of five eco-labels
Scepticism of sustainable product claim	Do consumers believe claims about products being sustainable?

Reported purchasing behaviour

Respondents indicate their actual purchase behaviour by self-reporting on topics such as expenditures for clothing, frequency of shopping clothes, time used for shopping and where they prefer to do their clothes shopping. Young Swedish consumers spend around 2.5 hours per shopping trip, with women spending more time than men. The shopping frequency is on average once to a few times a month. Figure 3 provides an overview over shopping frequencies. Women buy on average more often clothes than men. The average monthly spending on clothing is about 690 SEK. For this amount of money, young consumers purchase on average of 2.85 pieces of clothing (Min=0; Max=45).

Figure 3: Shopping frequency



Presented in Table 2 are locations where consumers buy their clothes and how often they shop there. The posed question is *“In the last six months, how frequently did you approximately use the listed clothing acquisition modes?”* The six answer categories ranged from 1 ‘never’ to 6 ‘more than 15 times’. The shopping mall is the most frequently used place. Women use more often high street, shopping malls, online shopping, mail order, small boutiques, second-hand and supermarkets than men.

Table 2: Mode of acquisition

	N	Mean	SD	Min	Max
High street	1175	2.56	1.301	1	6
Shopping mall	1175	2.98	1.308	1	6
Online shopping	1175	2.25	1.222	1	6
Mail order	1175	1.51	.905	1	6
Small boutiques	1175	2.14	1.059	1	6
Second hand	1175	1.79	1.130	1	6
Supermarket	1175	1.83	1.284	1	6
Swap	1175	1.30	.705	1	6
Other	1175	1.37	.941	1	6

1=never, 2=1-2times, 3=3-5 times, 4=6-10 times, 5=11-15 times, 6=more than 15 times

The role of price

Background: Price plays a crucial role in purchasing behaviour. As Hustvedt and Dickson (2009) report, price constitutes one of the main external barriers that consumers, who wish to adopt more sustainable clothing purchasing practices, face. In a similar vein, Iwanow and colleagues (2005) suggest that price, followed by product quality and style, constitute the main influences in general fashion purchase decisions. For respondents with higher income, the influence of price decreases, while quality considerations increase in importance.

Product prices constitute an important information cue to which consumers frequently turn to, especially if consumers are price-oriented. This is especially the case in the absence of other product cues or if consumers are unfamiliar with alternative information cues (Swinker and Hines, 1997).

While consumers frequently report to understand why environmental friendly clothing might come at higher prices, these additional costs, in interaction with consumers' financial resources, constitute a significant barrier (Hiller Connel, 2010). Yet, as Joergens (2006) suggests, affordability and prices might not always be linked to consumers' financial resources. Rather, consumers might have the financial means but might still not be willing to pay a higher price, if this means that they would be limited in the quantity of clothes they could purchase otherwise, disregarding the ethicality of the products. Thus, matters of price are closely linked to financial resources and consumers' wardrobe needs and wishes.

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Measurement: We measured both, the concept of “price orientation” as well as the concept of “price/quality orientation” by using the corresponding two dimensions from the “Food-Related Lifestyle” scale developed by Scholderer and colleagues (2004). Sample items highlight the meaning of the two dimensions:

- 1) Price: *I always check on prices, even on small items.*
- 2) Price/quality: *I always try to get the best quality for the best price.*

A high value means that the price orientation or the price/quality orientation is larger, i.e., price or price/quality relation is more important when purchasing clothes.

Results: The mean price score is 11.25 (SD=2.64, Min=3, Max=15). The average of the price/quality relationship is 11.24 (SD=2.46, Min=3, Max=15). A total score out of these two external factors gives a mean of 22.50 (SD=4.56, Min=6, Max=30). The comparison between men and women shows that women on average pay more attention to price as well as to price/quality relationship than men. All in all, this relatively high score for both sexes shows that price and/or price/quality relationship matters to young Swedish consumers in general. This is not surprising considering the low disposable income and high fashion orientation of this group.

Materialistic vs. post-materialistic values

Background: Materialism was originally described as the idea of goods and other possessions providing quality of life to consumers (Richins, 1987). Post-materialistic values, in contrast, are not achieved through material means, but should also contribute to quality of life. Thus, consumers with dominating materialistic values would be driven in their purchase behaviour by materialistic issues such as possession, while consumers with dominating post-materialistic values strive to achieve higher level of quality of life through other means than materialism.

Measurement: Based on the scale “Materialistic versus Post-materialistic Values” developed by Richins and Dawson (1992) we measure three materialistic values: the centrality of acquisition, possession as defining success, and acquisition as the pursuit of happiness. Examples clarify the meaning beyond each dimension:

- 1) Centrality of acquisition: *I usually buy only the things I need. (reverse)*
- 2) Possession as defining success: *The things I own say a lot about how well I’m doing in life.*
- 3) Acquisition as the pursuit of happiness: *It sometimes bothers me quite a bit that I can’t afford to buy all the things I’d like. (reverse)*

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A high level of these materialistic values is indicated by high scores of the three dimensions.

Results: Scores for acquisition centrality and acquisition as the pursuit of happiness are moderate and the score for possession as defining success is relatively low. Women have in the case of acquisition centrality higher scores than men. But in possession as defining success, men achieve higher scores on average than women do.

Background: Utilitarian shopping values means that shopping is rather viewed as 'work', rational and functional. Hedonic shopping values, on the contrary, are linked to enjoyment, fun and reflecting the entertainment value of shopping (Babin et al., 1994). As Gam (2011) suggests, consumers who value the hedonic elements of shopping are more inclined to purchase eco-friendly clothing for reasons of fun and wanting to try something new.

Measurement: The scale "Hedonic and Utilitarian Shopping Values" developed by Babin and colleagues (1994) reflects to which degree consumers derive hedonic and/or utilitarian shopping values. Examples of questions to identify hedonic and/or utilitarian shopping:

- 1) Hedonic: *Compared to other things I could have done, the time spent shopping was truly enjoyable.*
- 2) Hedonic: *While shopping, I felt a sense of adventure.*
- 3) Utilitarian: *While shopping, I found just the item(s) I was looking for.*

High scores indicate that shopping is more hedonic and/or utilitarian.

Results: The mean score for hedonic shopping values is 11.5 (SD=3.48, Min=4, Max=20), for utilitarian shopping values 13.6 (SD=3.28, Min=5, Max=20). On average shopping values are moderate for both, hedonic and utilitarian shopping values. Women show a higher score in hedonic shopping values than men, while there is no difference between men and women in utilitarian shopping values.

Involvement with clothes

Background: While research acknowledges that fashion consumption is of high importance to consumers, only little research on fashion involvement has been carried out to date (O'Cass, 2000). As O'Cass (2000) suggests, fashion involvement can be conceptualized as a consumer's perceived importance of fashion clothing.

Measurement: Based on the "Involvement with Clothes" scale developed by Michaelidou and Dibb (2006) we explore five dimensions: hedonism, impor-

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tance, self-expression, interest, and sign value. An impression of the meaning of those five dimensions can be gained from the following examples:

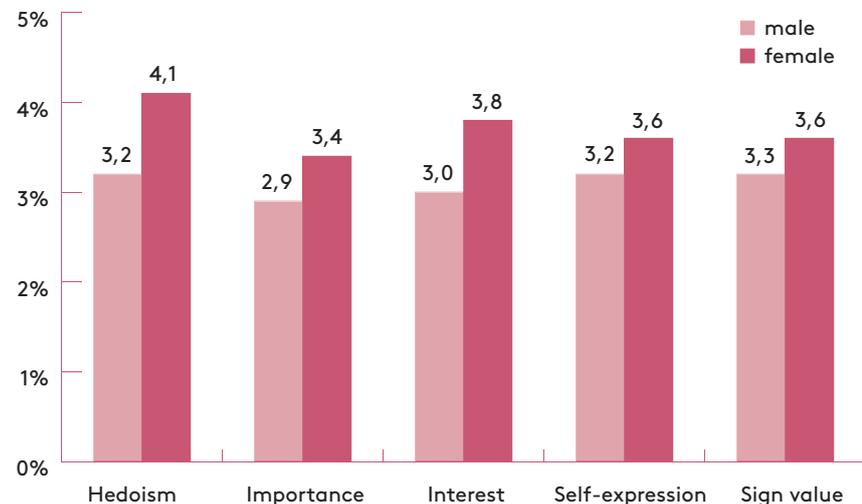
- 1) Hedonism: *It gives me pleasure to shop for clothes.*
- 2) Importance: *Relative to other products, clothing is the most important to me.*
- 3) Interest: *Clothing is a topic about which I am indifferent. (reverse)*
- 4) Self-expression: *Clothing is not part of my self-image. (reverse)*
- 5) Sign-value: *The kinds of clothes I buy do not reflect the kind of person I am. (reverse)*

The highest achievable score is 25, the lowest is 5. A high score indicates high involvement with clothes.

Results: The mean of the overall involvement with clothes score is 17.57 (SD=3.39, Min=6, Max=25). Mean scores for the five dimensions vary between 3.2 (importance) and 3.8 (hedonism) – for each dimension the minimum is 1 and the maximum is 5.

Figure 4 shows the mean scores for each involvement factor by sex. Women are on average more involved with clothes (mean 18.56) than men (mean 15.74). This is also true for all five sub-dimensions.

Figure 4: Involvement in clothes by sex



Functions of clothing

Background: The functions of clothing are an indicator of how consumers choose clothes for themselves. The concept has been closely related to body image. Kwon and Parham (1994), for example, found that consumers with

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a high body satisfaction use clothes more to express individuality, whereas consumers with lower body satisfaction are more interested in clothes as “camouflage”.

Measurement: We measure five different functions of clothing based on Tiggemann and Lacey’ scale of the same name (2009): fashion, camouflage, assurance, individuality, and comfort. The following items are suggestive of the meaning of those five dimensions of functions of clothes:

- 1) Fashion: *Clothes which are fashionable.*
- 2) Camouflage: *Clothes that camouflage my figure problems.*
- 3) Assurance: *Clothes which make me feel more sure of myself.*
- 4) Individuality: *Clothes that make me distinctive.*
- 5) Comfort: *Clothes which are comfortable.*

Answers ranged from 1 “strongly disagree” to 5 “strongly agree”.

Results: Higher scores indicate a higher degree of importance of these functions of clothing for a consumer. Table 3 shows the average scores for each function. Scores are relatively high for assurance (mean 3.73) and comfort (4.01) function and relatively low for camouflage (2.94) function. Women have higher scores in all five aspects of functions of clothing compared to men.

Table 3: Functions of clothing

	Fashion Function	Camouflage function	Assurance function	Individuality function	Comfort Function
Mean	3.29	2.94	3.73	3.18	4.01
SD	.81	.91	.78	.95	.87
Min	1	1	1	1	1
Max	5	5	5	5	5

Opinion leaders vs. opinion seekers

Background: Fashion opinion leaders can be defined as consumers who display an above-average interest in fashion and whose advice and opinion is sought after by others in their fashion purchases (Koch & Domina, 1997). While most attempts to describe fashion leaders and fashion followers are limited to demographic information, this discriminatory variable used alone does not constitute a significant predictor for socially responsible behaviour (Koch & Domina, 1997; Huddleston et al., 1993). Opinion leaders tend to be more active, self-confident and open towards trying out new ideas.

In an attempt to profile different environmentally oriented groups of female apparel shoppers as fashion leaders, fashion followers or fashion hobby-

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ists (based on textile recycling behaviour, lifestyle activities, importance of product and store attributes as well as general environmental attitudes), Domina and Koch (1999) found that, unlike fashion followers and fashion hobbyists, fashion opinion leaders were not significantly related to any of the developed environmental consumer segments. This observation might be explained by the assumed tension between a strong focus on fashion and short-lived trends on the one hand and high environmental concerns on the other hand.

Measurement: The scale “Opinion Leaders and Opinion Seekers” stems from Flynn and colleagues (1996). Sample items for both dimensions are:

- 1) Opinion leader: *People that I know pick clothing based on what I have told them.*
- 2) Opinion seeker: *When I consider buying clothes, I ask other people for advice.*

Results: The higher the score, the more a consumer classifies as opinion leader or seeker. The mean score for opinion leaders is 2.67 (SD=.75, Min=1, Max=5) and for opinion seekers 2.97 (SD=.73, Min=1, Max=5). The average consumer shows a relatively low score for opinion leader, the score for opinion seekers is relatively moderate. Women are on average more often opinion leaders than men.

General environmental and/or social impact awareness

Investigating the environmental awareness of the young Swedish consumers, three different measurement approaches were taken.

Background: First we looked at what Kim and Damhorst (1998) suggest, and that is that environmentally conscious consumers are generally interested in purchasing environmental friendly apparel and willing to pay more for these items.

The second approach was to identify if the environmental concerns translated into environmentally responsible apparel consumption behaviour. Butler and Francis (1997) found that protecting the environment appears to be of high importance to consumers. However, this criterion is not taken into consideration in the actual purchasing decision. It appears that its importance is considered less than other criteria, such as price or style. Likewise, Dickson (2000) found that consumers appear to be concerned about social issues in the apparel industry; yet, these concerns are not taken into consideration or feed into the purchasing decision.

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Thirdly, we measured actual environmental apparel consumption. As Kim and Damhorst (1998) suggest, consumers who are environmentally conscious are interested in purchasing environmental friendly apparel and willing to pay more for these items. However, while general environmental concern was found to be high in Kim and Damhorst's (ibid.) sample, these concerns did not translate into environmentally responsible apparel consumption behaviour.

Measurements: Three different measurements were used to gain insight into consumers' environmental and/or social awareness.

First, we measured "Environmental Concern" – a scale developed by Thøgersen and colleagues (2010). A high score indicates a high environmental concern. Examples of questions were:

- 1) *I am concerned about the development of the global environment.*
- 2) *I feel it is a moral obligation to use environment-friendly products.*
- 3) *I often buy eco-labelled products for the sake of the environment.*

Second, in order to measure the purchase behaviour, it was asked how often the environmental and/or social impact of clothing is considered when purchasing clothes. The measurement question – developed by Butler and Francis (1997) – was: *How often do you consider the environmental impact of clothing when you make clothing purchases?* Answers ranged from 1 'never' to 5 'always'.

Lastly, we measured "Environmental Apparel Consumption" – a scale developed by Kim and Damhorst (1998). Examples for items are:

- 1) *Avoid apparel products because of environmental concerns*
- 2) *Purposely select fabrics that require cooler washing temperature, shorter drying time, or less ironing*
- 3) *Buy apparel with environmentally friendly labelling or packaging techniques'.*

The four answer categories ranged from 1 'never' to 5 'always'. We built a sum score of all ten items. A high score indicates higher consumption of environmental apparel.

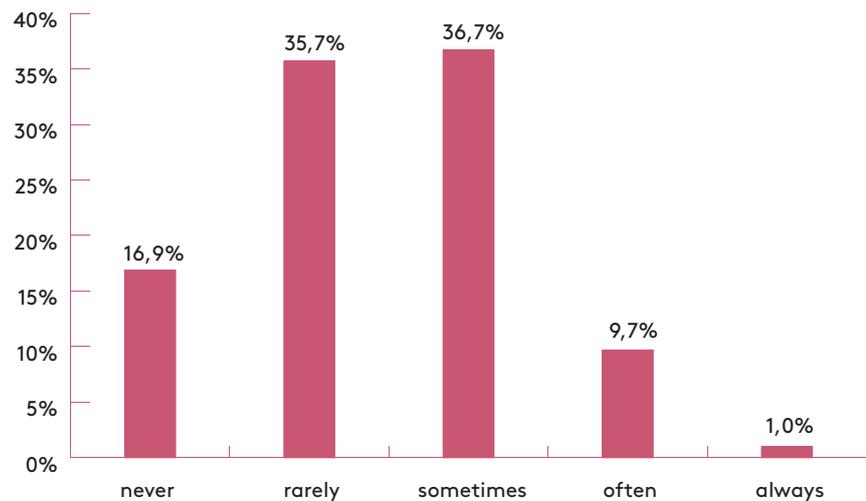
Results: From the first measurement, our average score for environmental concern amounts to 18.30 (SD=4.55, Min=5, Max=25) indicating relatively high environmental concern among the young Swedish consumers. Women are on average more environmentally and/or socially concerned than men. This is in line with the bulk of prior research in environmental and social concern.

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The second measurement had five potential answers and the average score is 2.42 (SD=.92, Min=1, Max=5). A high score indicates that the environmental and/or social impact of clothing is more often considered. As shown in Figure 5, most people sometimes consider the impact of the clothes. Women consider the environmental and/or social impact of clothing more often than men.

Lastly, the outcome of measured environmental apparel consumption had the average of 19.63 (SD=5.44, Min=8, Max=40). This indicates that the average Swedish consumer buys relatively few environmental apparel items in general. Women consume more environmental apparel in contrast to men.

Figure 5: Environmental and/or social impact of clothing



Perceived availability, accessibility & affordability of sustainable clothing

Background: According to Hiller Connell (2010), main barriers consumers face in their efforts to purchase in an environmentally aware manner is the limited choice of attractive sustainable clothing options available as well as the limited number of shops offering these products. Indeed, access to and availability of sustainable clothing is still quite limited. Limitation relates to matters of aesthetics, style, size, and fit and even more to specific product categories. In particular, business wear, footwear, formal wear, as well as intimate and outdoor apparel seem to be neglected clothing categories (Hiller Connell, 2010). Similar findings were reported by Shaw and colleagues (2006), Gam (2011) and Beard (2008). As Beard (ibid.) suggests, most producers of ethical or eco fashion tend to limit their product lines to casual basic clothes, which are suitable for everyday use but might not fulfil the

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requirements of more formal business wear. Likewise, luxurious, high-end fashion products in a sustainable quality appear to be of limited availability.

According to Meyer (2001), green apparel products are often less appealing to consumers than their conventional alternatives for a number of reasons. Not only is “green fashion” perceived to provide fewer choices, which often do not fulfil the same aesthetic and functional demands, but also that these choices are only available at higher costs. Meyer (ibid.) explains this reluctance with a lack of information about green fashion products and consumers’ uncertainty or scepticism regarding the actual environmental impact of these “green” alternatives. Thus, insufficient information can affect consumers’ motivation.

Measurement: To measure perceived availability, affordability and accessibility of sustainable clothing in the purchase phase, we used the scale “Perceived ability to promote ethical trade” developed by Uusitalo and Oksanen (2004). In the survey we asked whether subjects thought that there are enough sustainable product alternatives available to them. A high score means that they do not see availability, accessibility or affordability as a problem. Sample items highlight the meaning of the three dimensions:

- 1) Availability: *There are not enough sustainable product alternatives (reverse).*
- 2) Accessibility: *Information gathering about sustainability is difficult (reverse).*
- 3) Affordability: *Sustainable choices are expensive (reverse).*

Results: The resulting mean score of 15.12 (SD=3.49, Min=6, Max=30) is quite low, meaning that most consumers do perceive access, availability and affordability as a major barrier. This is less true for men than it is for women which can potentially be related to the fact that women are more environmentally concerned than men.

Label knowledge and usage

Background: A lack of information and consumers’ knowledge are closely linked to perceived availability of products. As Hiller Connell (2010) suggests, consumers might be unaware that environmental friendly product alternatives might be within reach, due to their lack of understanding of the ecological footprint of different fibres. Similar findings were reported by Gam and colleagues (2010).

According to Iwanow and colleagues (2005) the limited availability of national and international labelling schemes in the fashion context might constitute a major barrier for consumers to make informed purchasing

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decisions. However, considering that only few consumers might frequently look at labels in the purchasing decision (Dickson, 2000; Iwanow et al., 2005), the potential impact and effectiveness of labels is questionable. In addition to the limited availability of labelling schemes compared to e.g. the food industry, the voluntary nature of most labelling mechanisms and codes of conduct constitutes another barrier. As most of the initiatives are implemented by corporations themselves and thus lack monitoring and verification by external impartial organizations, consumers often respond to these efforts with suspicion (Iwanow et al., 2005).

In absence of information about the carbon footprint or environmental and/or social impact of a product, consumers often turn to other heuristics, such as country of origin, in order to evaluate the environmental or social impacts of a potential buy (Hiller Connel, 2010). In their best intentions to reduce the carbon footprint of a product or to support production in countries that supposedly takes place under stricter environmental legislation, consumers thus run risk of falling in the trap of their own, ill-informed assumptions.

Measurement: We asked whether consumers know and use five existing labels in the Swedish fashion context. The questions are based on Thøgersen and colleagues (2010). The labels are: EU Flower Label, Bra Miljöval, GOTS, Nordic Swan and Oeko-tex Standard 100. Answer categories ranged from 'never seen' to 'seen and know what it means'. A second question investigated the usage of already known labels with answer categories ranging from 'do not consider' to 'consider always'.

Results: As shown in Table 4 below, most people know the Nordic Swan followed by Bra Miljöval. These two labels are also the ones which are used - by far - most often for shopping guidance. In general, women know more labels than men, except for the GOTS label, which is equally known by the genders. However, when it comes to using the label for shopping, women only score higher in the cases of Bra Miljöval and Nordic Swan.

Table 4: Label knowledge/Label news

		EU Flower Label	Bra Miljö-val	GOTS	Nordic Swan	Oeko-tex Standard 100
Label know-ledge*	N	1,175	1,175	1,175	1,175	1,175
	Mean	1.73	3.21	1.36	3.32	1.83
	SD	.926	.755	.748	.711	1.029
	Min	1	1	1	1	1
	Max	4	4	4	4	4
Label use**	N	541	1141	268	1154	533
	Mean	1.59	2.04	1.71	2.10	1.75
	SD	.630	.616	.646	.619	.647
	Min	1	1	1	1	1
	Max	3	3	3	3	3

*1=never seen, 2=seen, but don't know what it means, 3=seen and have some idea about what it means, 4=seen and know what it means

**1=do not consider, 2=consider sometimes, 3=consider always

Scepticism towards sustainable product claims

Background: Moreover, we looked at scepticism of sustainable product claims in general. Knowledge of consumers' scepticism towards a product claim can help to understand their response to those sustainability claims (Mohr et al., 1998).

Measurement: To gain insight into young consumers' scepticism, an adapted version of the measurement scale "Scepticism of Environmental Product Claims" developed by Mohr and colleagues (1998) was used. A high score indicates high scepticism towards sustainable product labelling. The following example questions highlight the meaning of the concept:

- 1) *Sustainable claims made on product labels or in advertising are exaggerated.*
- 2) *I do not believe most sustainable claims made on product labels or in advertising.*

Results: In our survey, the mean is 14.98 (SD=3.18, Min=5, Max=25) and stands therefore for a relatively moderate scepticism towards environmental product claims. Women appear to be less sceptical than men.

Summary: Purchase Phase

Looking at the purchase phase, it becomes apparent that the average young Swedish consumer shops for clothes every month. The most frequented shopping outlets are shopping malls. On these shopping trips, the average consumer spends around 2.5 hours, amounting to around three

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items bought at the consumers' last reported shopping trip. The monthly expenditures for shopping clothes are on average 687 SEK.

Besides the frequency, modes, duration, number of purchases and financial costs of the respondents clothing shopping activities, we further investigated factors that are relevant to the purchase phase and the phase leading up to a purchase:

- price and price/quality relationship,
- materialistic values,
- hedonic (pleasure) and utilitarian (functional) shopping values,
- involvement in clothes,
- functions of clothes,
- opinion leader vs. opinion seeker,
- general environmental and/or social impact awareness,
- perceived availability, accessibility and affordability of sustainable clothing,
- label knowledge and use as well as
- scepticism towards sustainable product claims.

Price orientation and the price/quality relationship orientation appear to matter to young consumers, with women paying more attention to both the price and value-for-money element than men.

The average young consumer demonstrates a balance between shopping for pleasure and shopping only when in need of clothes. While female Swedes indicate to enjoy the hedonic elements of shopping for clothes more than their male counterparts, no differences could be observed regarding the functional, rational sides to shopping. Materialistic values might be related to these shopping values as the simple possession of clothes is less important than the benefits from the acquisition process and the mere happiness gained through buying clothes. This appears to be especially true for women. On average, men are, however, a bit more invested in the statement their clothing has to say about their success.

Clothes are important to the average young Swedish consumer which is shown by their average relatively high involvement with clothes. Clothes have some key symbolic and psychological functions: they support the expression of individuality and style and act as self-assurance, source of confidence and comfort provider. Generally, young Swedish consumers are highly involved with clothes, women more than men.

While clothes appear to be generally speaking very important, only few young Swedes consider themselves as opinion leaders when it comes to

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fashion, with women doing more so than men. Instead, the majority rather tends to seek advice and assistance in their fashion decisions. This reflects a pretty normal picture known from youth consumption in general.

The Swedish average consumer perceives to be challenged by many barriers when considering acquiring sustainable clothing: the limited availability, accessibility and affordability of more sustainable options, as well as a lack of information as regards sustainable clothing. This lack of information, and its interplay with consumers' knowledge, becomes for instance apparent with regard to label knowledge and usage. The average consumer knows the labels "Nordic Swan" and "Bra Miljöval" and considers these sometimes for clothing purchase decisions. Other labels such as the "EU Flower", "GOTS" or "Oeko-tex Standard 100" are hardly known at all. "Nordic Swan" and "Bra Miljöval" might be better known because they are not only labels for clothing, but for many other product categories as well.

Environmental and social concern is pronounced among young Swedish consumers, with women being more concerned than men. Despite or maybe due to these general positive attitudes towards environmental and social matters, consumers show on average a moderate scepticism towards sustainable product claims. This could mean that there is a general willingness to act more sustainably, but simultaneously there is also a confusion and lack of trust in claims on sustainability. This might also play into the fact that environmental/social awareness does not always translate into purchase of more environmentally friendly apparel even if the consumer sometimes considers the environmental/social impact in the purchasing process.



Chapter 7

the use phase: maintenance of clothes

Chapter 7 – The use phase: Maintenance of clothes

7. The use phase: Maintenance of clothes

The main interest in the use and maintenance phase are the actions taken by consumers regarding product quality and durability (e.g. washing and mending clothes), as well as the environmental, social, and economic consequences of those actions.

Activities like using a washing machine and a tumble dryer, dry cleaning of clothes, and the use of detergents and mending of clothes have a direct environmental impact with regard to water and energy use and pollution. For instance, the environmental and social consequence of toxic waste water being discharged in dry cleaning is closely linked to individuals and public health. Toxic water ultimately finds its way back into the food chain, thus will eventually impact the health of consumers (Roesner et al., 2006). Increased water and energy use can have direct economic consequences for the consumer. According to Laitala and Klepp (2011), limited use of tumble dryers and washing machines appears to be more closely linked to economic motives than to environmental considerations. They (ibid.) report that many consumers claim to avoid using tumble driers for economic reasons, i.e. save electricity, or to avoid wear and tear of clothes. Similarly, many consumers express their will to avoid running washing machines with half full loads due to economic considerations.

Consumers' maintenance behaviour, e.g., mending, altering, or refashioning, depends largely on consumers' skills and abilities. Thus, engaging into these maintenance behaviours is only possible for consumers who possess the necessary skills, interest and resources, in particular time. As Hiller Connell (2010) suggests, extending the aesthetic as well as technical lifetime of clothes is primarily accomplished by taking good care of one's clothes as well as by repairing, altering, and refashioning garments.

However, mistaken maintenance behaviour, e.g. wrong application of cleaning detergents, might have negative effects on all: consumers' budgets, their health and the environment. The incorrect use of fabric softener, for example, can diminish the durability of the product and decrease if not destroy key functional features (e.g. smell preventing in sportswear) (Wood, 2009).

More examples of relevant behaviours in the use and maintenance phase are: frequency of use of washing machine, dry cleaning, and tumble dryer as well as temperature and size of wash loads, use of detergents and fabric softeners (Defra, 2011).

Chapter 7 – The use phase: Maintenance of clothes

In Table 5, we list the topics/measurement scales and their meaning for the use & maintenance phase (sources provided in the Appendix).

Table 5: Use phase – Overview of concepts and meanings

Topics/measurement scales	Meaning
Maintenance behaviour	Which appliances are used to maintain/ wash clothes and how often are they used? (washing machine, tumble dryer, flat iron, hand washing, dry cleaning)
Washing temperature	The temperature used while washing clothes.
Wearing frequency	How many times is a garment worn before washed? (2 examples)
Use of detergent	Do consumers use detergent, and what kind do they use?
Mending behaviour	How often are clothes mended/ repaired/altered?

Maintenance behaviour

Background: Many of the behaviours in the use & maintenance phase are routinized or habitual. Habits and routines are functional in the sense that they save consumers time and effort and ease the need for decision making. Because these behaviours once learned become a routine and are rarely revisited or challenged, results might not be as optimal as they could be in the light of better available technology or improved knowledge (Fischer, 2008). Two frequently cited examples of such habitual behaviours in the use and maintenance phase with measureable environmental impact are the use of a tumble dryer (ibid.) and overdosing of washing detergents (Bain et al., 2009).

Measurement: The use of various maintenance methods was investigated by asking if consumers use the following appliances/methods for cleaning their clothes: “washing machine”, “tumble dryer”, “flat iron”, “hand washing” and/or “dry cleaning”. Answers were given in a ‘yes’ or ‘no’ format. In case consumers indicated the use of a method, they received a question on the frequency of its use. The question was: If yes, how often do you use it on average?

Answers ranged from 1 ‘more than 2 times a week’ to 6 ‘less than once a month’. Hence, the higher the value the less often the appliance/method is used.

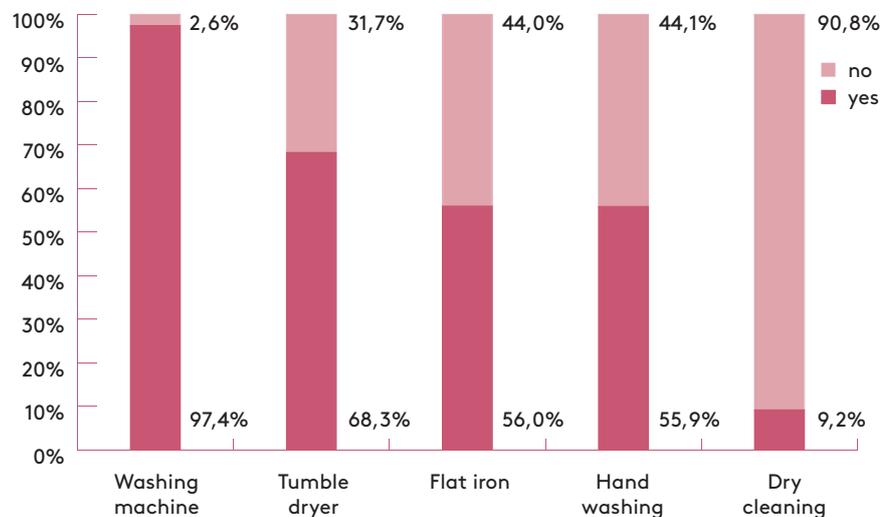
Results: Figure 6 shows the percentage of consumers using a method/appliance. The respondents indicated whether or not they regularly use one of the following appliances/methods to maintain their clothes. Almost all re-

Chapter 7 – The use phase: Maintenance of clothes

spondents use a washing machine (97.4%), the majority has also access to a tumble dryer (68.3%), about 56% hand wash and iron their clothes. Only 9.2% use dry cleaning.

More women than men use a washing machine and hand washing, but more men use dry cleaning.

Figure 6: Usage of maintenance methods



As Table 6 shows, the washing machine is the most frequently used appliance, followed by tumble dryer and flat iron (a lower mean indicates a higher use frequency). Women use tumble dryer, dry cleaning, and flat iron less often compared to men.

Table 6: Frequency of maintenance methods used

	N	Mean	SD	Min	Max
Washing machine	1444	2.88	1.23	1	6
Tumble dryer	802	3.40	1.23	1	6
Dry cleaning	108	5.19	1.39	1	6
Flat iron	658	4.32	1.48	1	6
Hand washing	657	4.68	1.28	1	6

Washing temperature

Background: Incorrect treatment of clothes frequently results in premature disposal. Using high temperature while washing can have both economical

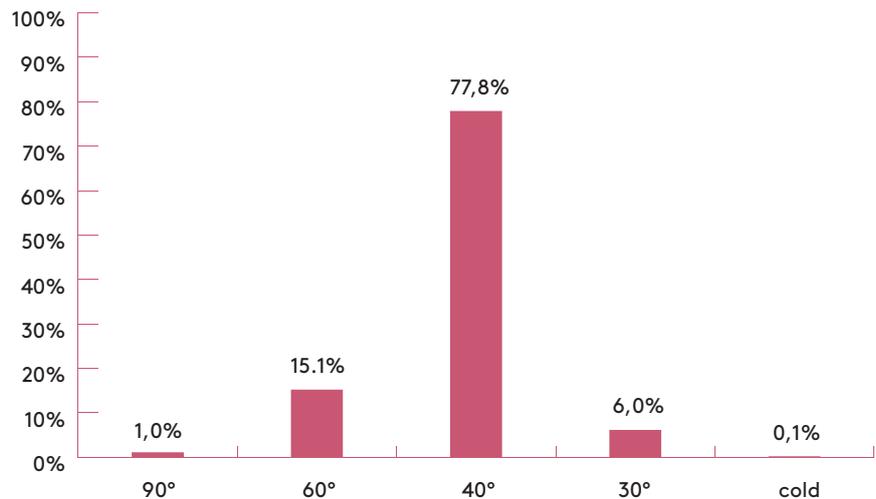
Chapter 7 – The use phase: Maintenance of clothes

effect as well as affecting the usability of clothes. Laitala and Klepp (2011) suggest that technical problems (including washing too hot), which occur in the use and maintenance phase of consumption, are among the most important reasons for clothing disposal.

Measurement: Respondents were asked about the washing temperature that is most frequently used. They could choose out of five categories: cold, 30 C, 40 C, 60 C and 90 C.

Results: As shown in Figure 7, most respondents (77.8%) usually use a temperature of 40 C to wash their clothes. Women prefer a colder washing temperature than men do.

Figure 7: Washing temperature



Use of detergent

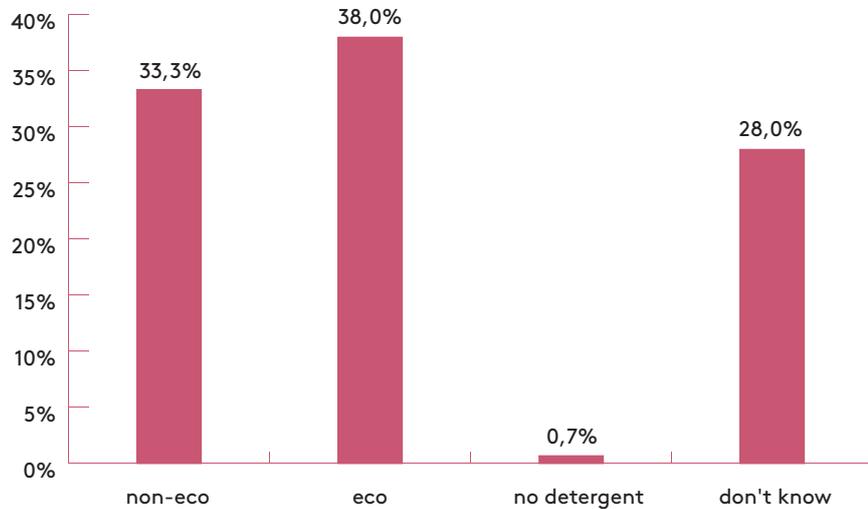
Background: The use of washing detergents and fabric softeners might directly impact on the health of the user. In times of an increasing proportion of the world population suffering from allergies, allergic skin reactions to perfumes, enzymes and other additives used in washing detergents can affect the health of consumers, which in turn can become a societal problem (Dallas et al., 1992; Rowe, 2006). Also, financial saving potentials are regularly utilized by using the right (usually: a smaller) dosage of detergents (Eder-Hansen et al., 2012).

Measurement: We asked what type of detergent consumers mainly use. The answer options were 'eco', 'non-eco', 'I do not know' and 'no detergent at all'.

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Results: Figure 8 shows that about 38.0% of respondents use eco detergents, 33.3% use conventional and 28.0% do not know what type of detergent they use. Females are more inclined to use an eco-detergent compared to men.

Figure 8: Type of detergent used



Wearing frequency of clothes

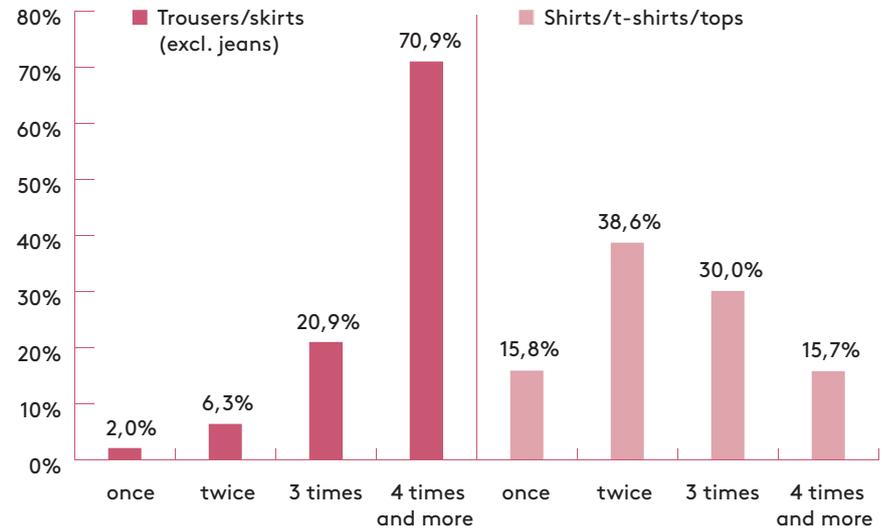
Background: According to Laitala and Klepp (2011), the limited use of tumble dryers appears to be mostly related to economic rather than environmental factors. According to their report, many consumers claim to avoid using tumble dryers for economic reasons, i.e. save electricity or to avoid wear and tear of clothes. Similarly, many consumers express the willingness to avoid running washing machines with half full loads due to economic considerations.

Measurement: We asked the consumers about the wearing frequency of clothes before washing. 'How often do you wear your clothes on average before you wash?' We distinguished between trousers/skirts (excluding jeans) and shirts/t-shirts/tops. Answer categories ranged from 1 'once' to 4 '4 times or more'.

Results: As presented in Figure 9, trousers and skirts are mostly worn four times or more (70.9%), while most young Swedish consumers wear their shirts/t-shirts/tops twice (38.6%) or three times (30.0%). Women wear their clothes more often before washing than men.

Chapter 7 – The use phase: Maintenance of clothes

Figure 9: Wear before wash



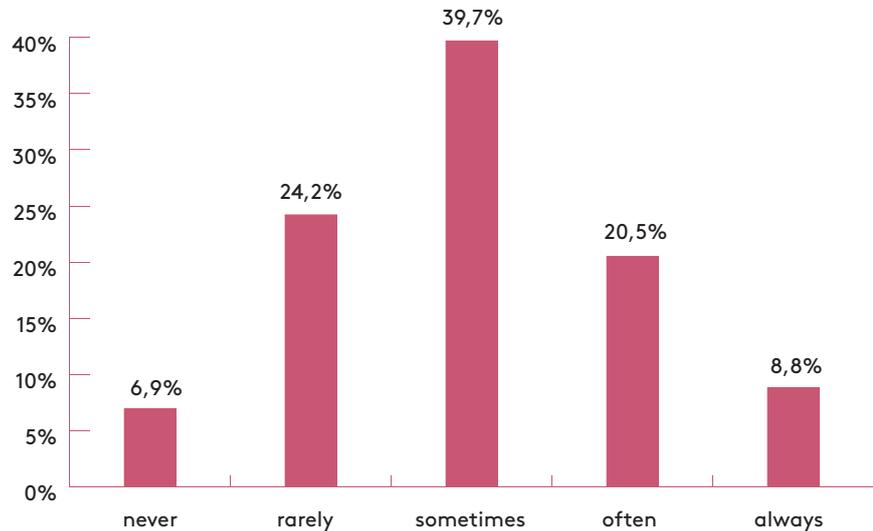
Mending behaviour

Background: Maintaining product quality and durability, i.e. extending the aesthetic and technical lifetime of clothes, is primarily accomplished by taking good care of and repairing or refashioning ones clothes (Hiller Connell, 2010).

Measurement: Finally, we asked about consumers' mending behaviour: Do you mend your clothes (e.g. sewing, stitching, and darning)? The answers ranged from 1 'never' to 5 'always'.

Results: Most respondents mend their clothes sometimes (39.7%), and about 29.3% mend their clothes "often or always" (Figure 10). Women mend their clothes more often than men do.

Figure 10: Mending clothes



Summary: Use and maintenance phase

As this surveys data clearly depicts, practically all young Swedish consumers have access to and use a washing machine for regular washing of their clothes. On average, tumble dryers and flat irons are also frequently used. More women than men use washing machines and hand wash their clothes, but men choose more often dry cleaning. As most activities in the maintenance and use phase, these observations have to be seen in the light of household composition and arrangements regarding household chores as well as types of clothing/clothing categories. Hand washing of clothes is most frequently applied to sensitive clothing items, made of delicate fabrics, e.g. lace, silk, cashmere; fabrics, which are more frequently found in female wardrobes. In a similar vein, societal expectations and variations in work wear in the Scandinavian context allow females more flexibility in their choice of attire. Male wear frequently involves shirts and two-pieces; clothing items which are frequently perceived to be more easily maintained by professional dry cleaning services compared to home treatment.

When it comes to the frequency of using the different maintenance methods, men use the appliances more often than women, which might be related to the fact that men wear their clothes less often than women do before washing. Before washing their clothes, consumers wear trousers/skirts on average four times or more and shirts/t-shirts/tops on average twice.

Chapter 7 – The use phase: Maintenance of clothes

The average washing temperature used is about 40 degrees, with women preferring colder washing temperatures than men. The survey also revealed that 38.0% of Swedish consumers, mostly women, use an eco-detergent in their washing process. However, around 28.0% of the respondents did not know which detergent they use, so the use of the eco-detergent might be even higher.

When it comes to mending and repairing the clothes to avoid early discarding, more than 29% of the respondents claim to mend their clothes often or always (20.5% often and 8.8% always). This demonstrates the interest among young Swedish consumers to keep their clothing for longer periods of time, i.e. at least not to toss them at the first sign of wear and tear.



Chapter 8

the discarding phase

8. The discarding phase

With the rise of fast fashion consumption, retailers offering trendy garments at low prices are increasing and a throwaway consumer culture has emerged, with garments being discarded after only being worn few times (Birtwistle & Moore, 2007). As young consumers are the main target group of fast fashion retailers, gaining an understanding of those young consumers' disposal habits appears to be of utmost importance. With high involvement in fashion products (Goldsmith et al., 1991; O' Cass, 2000) being reflected in their high purchasing behaviour and disposal frequency of fashion items, young consumers also contribute to the increasing amount of textiles in landfills each year (Birtwistle & Moore, 2007). In general, larger quantities of textiles are being discarded. One example is that textile waste collected at council refuse points in the UK has increased by 23% by weight from 2003 to 2008 (Poulter, 2008). However, these statistics need to be handled with caution, as textile waste not only refers to consumers' clothing but also to carpets and other textile products.

However, increased fashion consumption and consequently increased clothing disposal are linked to intensifying the landfill problems and pose challenges for charity shops. As Morgan and Birtwistle (2009) report, many charity shops in the UK have reached their saturation point. Exporting more second-hand clothing to the developing world cannot be simply understood as altruistic acts but also as passing on the responsibility of waste management. The recent burning of excess stock of donated clothes by the Danish charity organization Kirkens Korshær can be seen as an example of overstrained charity shops that appear helpless in the face of ever increasing clothing donations (Schelde & Johansen, 2012).

While discarding and recycling behaviour in other areas received a lot of attention by academics, this is not true for discarding and recycling behaviour of clothing (Birtwistle & Moore, 2007).

In Table 7, we list the topics/measurement scales (and their meaning) investigated in the survey (sources provided in the Appendix).

Table 7: Discarding phase – Overview of concepts and meaning

Topics/measurement scales	Meaning
Textile recycling attitudes	Consumers' attitude towards recycling
Reasons for discarding	Consumers' motivation for discarding clothes
Disposal behaviour	Use of disposal/recycling methods

Chapter 8 – The discarding phase

Textile recycling attitudes

Background: Intrinsic rewards from helping needy people were also reported by Koch and Domina (1999) as major motives for those respondents who prefer to donate their unwanted items to charity organizations. Reuse or re-selling via consignment shops or garage sales, on the other hand, were the most frequently used disposal options for respondents driven by economic or environmental reasons for garments that were still perceived as valuable.

Shim (1995) distinguishes between seven different disposal patterns which differ not only in the disposal method (donation, reuse, discarding) but also in their underlying motivation (charity-, environmentally-, convenience-, or economically-motivated act).

Measurement: Using the scale “Textile Recycling Attitudes” developed by Domina and Koch (1999) to identify reasons why young consumer discard their clothes, we firstly asked about consumers’ attitudes towards different textile discarding strategies, i.e. resell, reuse, donate, disinterested, and hassle. Each attitude was measured through several items, and then an average score for each one was summed up. The examples of items below illustrate the meaning of the different dimensions:

- 1) Resell: *I sell much of my clothing at second-hand stores for economic reasons.*
- 2) Reuse: *I reuse garments for other purposes to get the most out of them.*
- 3) Donate: *I often give away my clothing to charity.*
- 4) Disinterested: *I never reuse/recycle clothing because I don't know how to go about it.*
- 5) Hassle: *I find it convenient to throw away unwanted garments.*

The five answer categories ranged from 1 ‘never true’ to 5 ‘always true’. A high score indicates a strong positive attitude towards one dimension.

Results: As can be seen in Table 8, respondents have stronger tendencies towards donating and reusing their clothes, but a weaker tendency towards reselling. They are more positive towards reuse clothes and donations. Few respondents showed disinterest in clothing recycling or even perceived it as a hassle. Women show higher tendencies towards resell, reuse, and donation than men do. Men show more disinterest and perceive textile recycling more as a hassle than women.

Table 8: Textile recycling attitudes

	Mean	SD	Min	Max
Resell	2.34	1.08	1	5
Reuse	3.05	.97	1	5
Donate	3.77	1.04	1	5
Disinterested	2.41	.78	1	5
Hassle	2.44	1.03	1	5

1 'never true', 2 'rarely true', 3 'neutral', 4 'sometimes true', 5 'always true'

Reasons for discarding

Background: Different reasons might drive or force consumers to part with some of their clothes. Based on the findings of her study, Klepp (2001) suggests the following typology of disposal reasons: (1) technical or quality related reasons, (2) psychological reasons, (3) situational reasons, (4) "never worn" phenomenon, (5) functional, and (6) sentimental reasons. Technical, psychological, and situational reasons for disposal were found to constitute the most common grounds for disposal among the 24 middle-aged women that Klepp (2001) interviewed.

Although some might expect that one of the primary motives for consumers to engage in clothing donations might be acts of altruism, Ha-Brookshire and Hodges (2009) found that consumers are rather driven by self-oriented motives, such as the wish to create more space in their wardrobes for new things. In that sense, clothing disposal is closely related to clothing acquisition. Even though the closet cleaning appears to be connected to feelings of guilt – guilt over (repeated) purchase mistakes, overconsumption, or simply for not wearing an item often enough – this guilt does not seem to stop consumers from looking forward to filling their closets up again with new items. The sorting through or identification process of potential disposal items is, however, not only connected with feelings of guilt over own consumption behaviour but also with feelings of anxiety, whether they are making the right choice to keep or to give away items. Feelings of anxiety or guilt seem to disappear once the participants donated their unwanted items. Cleaning up one's closet thus resulted in the satisfaction of both utilitarian (achieving goal of cleaning up closet) and hedonic values (feeling better by reducing guilt and anxiety).

Similarly, Morgan and Birtwistle (2009) found that young consumers were especially plagued by feelings of guilt in case of expensive, higher quality clothing items that they had seldom or never worn. Donating these items to charity organizations made them feel better, thus provided a source of relief.

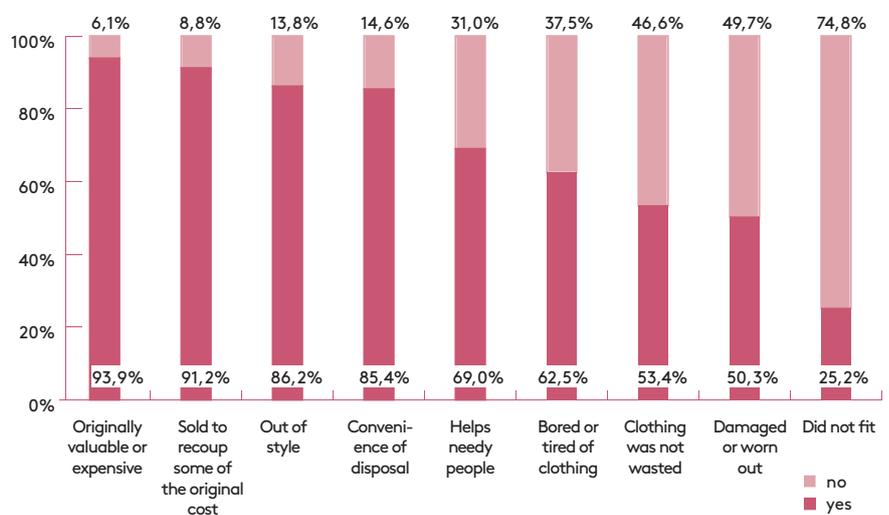
Chapter 8 – The discarding phase

The study of consumers' motives for disposing of unwanted clothes, especially as garbage disposal, certainly is a sensitive topic. As Laitala and Klepp (2011) report, only very few respondents admitted to throw their old clothes into the garbage. In the same vein, only very few female respondents admitted that fashion aspects (e.g. out of style, bored with garment) were reasons for disposal.

Measurement: Based on the scale "Reasons for Discarding Unwanted Garments" developed by Domina and Koch (1999), we asked consumers about reasons for discarding their clothes. The measurement question was: *What were the three main reasons for discarding unwanted garments?* The consumers could choose up to three of the following statements: 'originally valuable or expensive', 'did not fit', 'out of style', 'bored or tired of garment', 'sold to recoup some of the original cost', 'damaged or worn out', 'convenience of disposal', 'clothing was not wasted', 'helps needy people'.

Results: As shown in Figure 11, the reason for discarding most consumers indicate is 'originally valuable or expensive' followed by 'sold to recoup some of the original cost'. More women than men indicate that the reason for discarding unwanted clothes is that they are 'bored or tired of clothing', 'clothing was not wasted', and that it 'helps needy people'. More men than women indicate that they discard unwanted clothes because they are 'damaged or worn out'.

Figure 11: Reasons for discarding



Disposal channels

Background: According to Paden and Stell (2005), disposal decisions can be classified into two groups, depending on whether some sort of redistribution

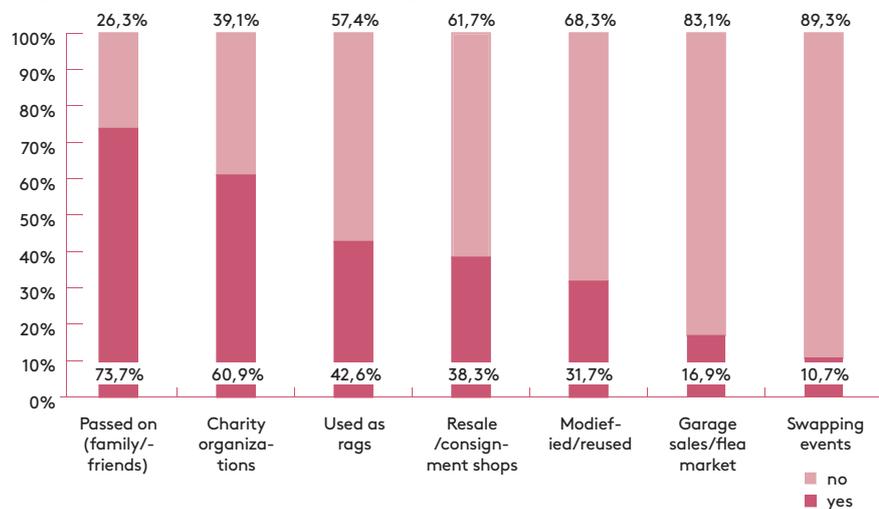
Chapter 8 – The discarding phase

is intended or not: Disposal without redistribution intent refers to throwing away unwanted garments which go directly to the landfill. Alternatively, unwanted garments can also enter different redistribution channels which can be of direct or indirect nature and with or without remuneration. Direct redistribution without remuneration refers to hand-me-downs, the passing on of unwanted items to individuals. The indirect redistribution without remuneration on the other hand refers to any form of charity that takes over the task of passing the item further on without gaining a profit, or using a potential profit for charitable acts. Garage sales, flea markets, or classified ads constitute examples of direct channels of redistribution with remuneration. Indirect channels that fall into this category cover second-hand retailers, auctions, consignment shops, pawn shops and the like.

Measurement: The different disposal or recycling channels in the survey stem from Domina and Koch (1999) and included: 'passing clothes on to family or friends', 'donating to charity organizations', 'use as rags', 'resale or consignment shops', 'clothes were modified and then reused', 'garage sales or flea markets' and 'swapping events'. As a first step, we asked consumers to indicate whether or not they used a discarding channel within the last twelve months.

In case the respondents indicated that they had used a specific disposal strategy within the last twelve months, we asked about the frequency with the following answer options '1-2 times', '3-4 times' and 'more than 5 times'.

Figure 12: Use of disposal/recycling ways



Results: As shown in Figure 12, many people pass on their clothes to family or friends as well as to charity organizations. Only few respondents use swapping events and garage sales/flea market.

Chapter 8 – The discarding phase

During the last year, more women than men used resale shops/consignment shops, garage sales/flea market, charity organizations, passed clothes on to family or friends, modified it and then used it in another form, or attended swapping events.

Passing on to family or friends is the most frequently used discarding strategy as can be seen in Table 9. Women use more frequently resale and consignment shops than men do. They also tend to pass clothes more often on to family members or friends or to use them as rags.

Table 9: Frequency of use of disposal/recycling ways

	N	Mean	SD	Min	Max
Resale shops/Consignment shops	450	1.46	.700	1	3
Garage sales/Flea market	199	1.29	.555	1	3
Charity organizations	715	1.45	.666	1	3
Passed on to family or friends	866	1.60	.743	1	3
Modified it and then used it in another form/reused	373	1.49	.682	1	3
Used as rags	501	1.52	.694	1	3
Swapping events	126	1.38	.643	1	3

1=1-2 times, 2=3-5 times, 3=more than 5 times

Summary: Discarding Phase

When looking at the discarding phase of fashion consumption, it becomes apparent that reasons for discarding, the items that are to be discarded and disposal channels cannot be viewed separately. For instance, when it comes to discarding unwanted garments, the reasons indicated by most consumers pertain to the value or price of the item, for instance, originally valuable or expensive items. Passing these items on to family members and friends, one of the main disposal channels indicated, appears to be a suitable format for reusing these valuable pieces.

In a similar vein, the average consumer has not only positive attitudes towards reusing but also donating. These positive attitudes fit nicely with reported discarding behaviour: besides 'passing down to family and friends', the second main channel used is 'donating to charity' (donation). Frequently mentioned reasons for disposal, pertaining to convenience and altruistic thinking, appear to fit very well to these disposal forms. Albeit the majority of consumers indicating that they would sell pieces to recoup some of the original cost or that they considered unwanted garments to be originally valuable or expensive, reselling channels, such as consignment shops or flea markets are only used to a lesser extent.

Chapter 8 – The discarding phase

Only few respondents are disinterested and perceive the discarding process as a hassle. Mostly men viewed the discarding process as a hassle and/or were disinterested in the process. This might also explain why men to a lesser extent discard of clothing items when they are out of style and instead discard more when they consider their clothes to be “damaged or worn out”.



Chapter 9

stages of change

9. Stages of change

Background: The concept of Stages of Change is an alternative approach to traditional consumer segmentation. It is based on Prochaska and DiClemente's (1984) and Andreasen's (1995) work in social marketing. Andreasen suggests that policies to change consumer behaviour must start with a thorough understanding of consumer awareness, knowledge and readiness to change behaviour. "Stages of Change" is a model to understand and segment consumers not only by their socio-demographic information, but also by which stage as regards a specific behavioural development they are currently in. The four stages are called (1) pre-contemplation, (2) contemplation, (3) preparation, and (4) action & maintenance.

We briefly describe the four stages (groups) as we employ the model in our study (Andreasen, 1995):

(1) Pre-contemplation is the stage in which there is no intention to change behaviour in the foreseeable future. Most consumers in this stage are unaware or under-aware of sustainability issues in fashion consumption.

(2) Contemplation is the stage in which consumers are aware that a problem exists and are seriously thinking about overcoming it but have not yet made a commitment to take action. Contemplators struggle with their negative evaluations of their dysfunctional behaviour and the amount of effort, energy, and loss it will cost to overcome it.

(3) Preparation is the stage in which consumers are intending to take action in the near future whenever convenient. Here, consumers report some small behavioural changes ("baby steps"). Although they have made some efforts to change, consumers in the preparation stage have not yet reached a criterion for effective action.

(4) Action & Maintenance is the stage in which individuals modify actively their behaviour, experiences and/or environment to overcome sustainability issues. Action involves the most overt behavioural changes and requires considerable commitment of time and energy. Maintenance is the last stage in which people work to prevent relapse and consolidate the gains. If consumers in the Action & Maintenance group are also maintainers, they consistently consume fashion in a sustainable way throughout all consumption phases.

Measurement: To identify the respective stage of change of respondents, we employed a vignette based on Mohr and colleagues (2001). The question was phrased as follows:

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Please take a moment to think about the part played by one or both of the following issues when you are deciding what to buy: (1) how companies behave toward their employees, the community, and the environment and (2) the environmental impact of the products themselves. Please select one of the following statements that most closely describes, overall, the extent to which these are considerations for you.

Respondents had to choose one out of four statements that actually mirrors their behaviour best. The statements are

- (1) *'I base my purchase decisions on product and service quality, price, and convenience. I am not concerned with these issues and I don't think about them when deciding what to buy',*
- (2) *'I believe that these issues are important, but it is too difficult and time-consuming to base my purchase decisions on them',*
- (3) *'When it is easy to do, I use information on these issues in my purchase decisions', and*
- (4) *'I make an effort to learn about these issues, and I am willing to pay more or sacrifice product quality in order to use these issues in my purchase decisions'.*

In order to reduce framing effects and to minimize socially desired answers, the “Stages of Change” question was deliberately positioned at the very end of the second part of the survey questionnaire.

Results: Table 10 presents the results. Most young Swedish consumers fall into the (2) Contemplation group (45.9%), followed by the (3) Preparation group (34.0%) and the (1) Pre-contemplation group (14.6%). The smallest group is the (4) Action & Maintenance group (5.5%), i.e. those consumers that already show and maintain sustainable fashion behaviour.

In the following, we compare previously presented topics from each of the three consumption phases (purchase, use & maintenance, discarding) between consumers in the four stages. This is to identify whether consumers from stage (1) to stage (4) consume more sustainably or not. Beyond comparing reported behaviour, we present differences in motivation, attitudes etc. between the groups.

It is interesting to note that we found no significant differences between the four groups with regard to socio-demographics.

Chapter 9 – Stages of change

Table 10: Stages of change

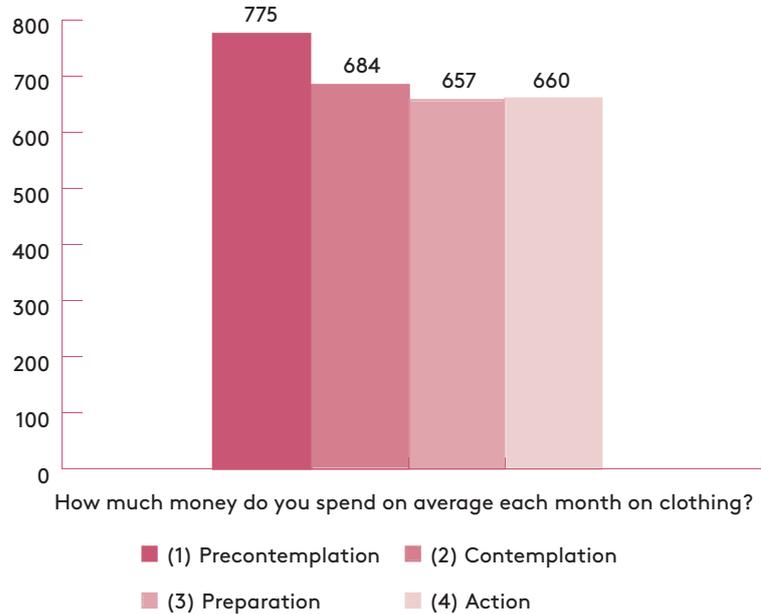
	Stage/group	Statement in questionnaire	N	%
 <p>Low commitment</p> <p>High commitment</p>	(1) Pre-contem- plation	I base my purchase decisions on product and service quality, price and convenience. I am not concerned with these issues and I don't think about them when deciding what to buy.	172	14.6
	(2) Contempla- tion	I believe that these issues are important, but it is too difficult and time-consuming to base my purchase decisions on them.	539	45.9
	(3) Preparation	When it is easy to do, I use in-formation on these issues in my purchase decisions.	399	34.0
	(4) Action & Main- tenance	I make an effort to learn about these issues, and I am willing to pay more or sacrifice product quality in order to use these issues in my purchase decisions.	65	5.5

The Stages of Change and the purchase phase

Starting with the purchase phase, we cannot identify any significant difference between the Stages of Change and shopping frequency, average time spent per shopping trip, number of items purchased per shopping trip and the amount of money spent monthly on clothing (see Figure 13). However, the modes of acquisition differ: While consumers in Stage (1) to (3) prefer shopping malls, respondents in Stage (4) use more often second-hand outlets or swapping. Stages (1) to (3) indicated to have bought clothes about 3-5 times within the last six months in shopping malls, Stage (4) only 1-2 times. For second-hand outlets it is exactly the other way around. Swapping is on average never used by the first three stages, but 1-2 times by Stage (4). All other acquisition modes (high street, online shopping, mail-order, small boutiques, supermarkets and others) do not differ between the Stages of Change.

What this could potentially mean is that for the more sustainably minded individuals in Stage (4), second-hand is more sustainable by contributing to reuse of clothes. It is interesting that Stage (4) does not spent less time and money or does not buy fewer items than the other three groups, but just opts for a different purchase channel: second-hand shopping.

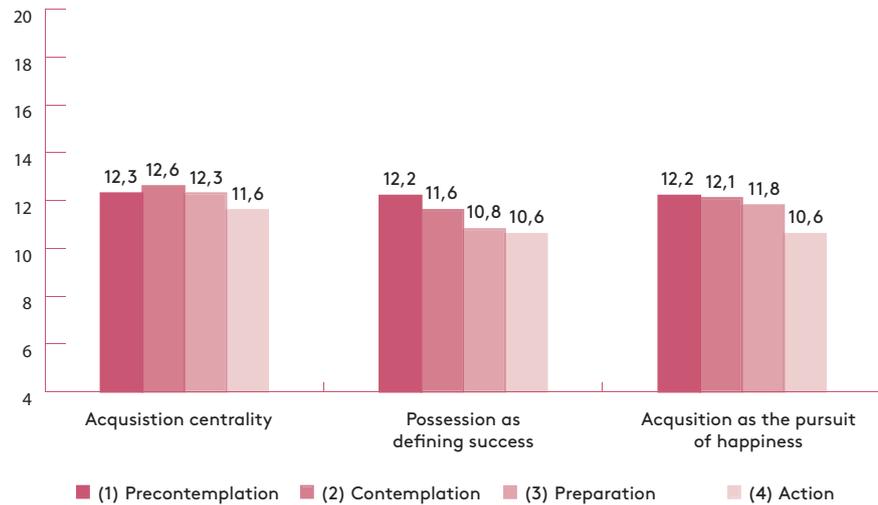
Figure 13: Spending on clothing by Stages of Change



Price is more important for the Stages (2) and (3) compared to the least sustainable and the highest sustainable stages, (1) and (4). Regarding materialistic values, we find that the centrality of acquisition is equal for Stages (1) to (3) – between 12.3-12.6 – but significantly lower for the Action & Maintenance group (4) – 11.5. The importance of possessions defined as success as well as acquisition as a pursuit of happiness decreases from Stage (1) to Stage (4). All results on materialistic values are depicted in Figure 14. Hedonic shopping values do not differ between the Stages of Change. The same is true for functions of clothing, with one exception: the expression of individuality through clothing is higher valued by the Action & Maintenance group (4) compared to all others. Stages (1) to (3) are also more opinion seekers than Stage (4)

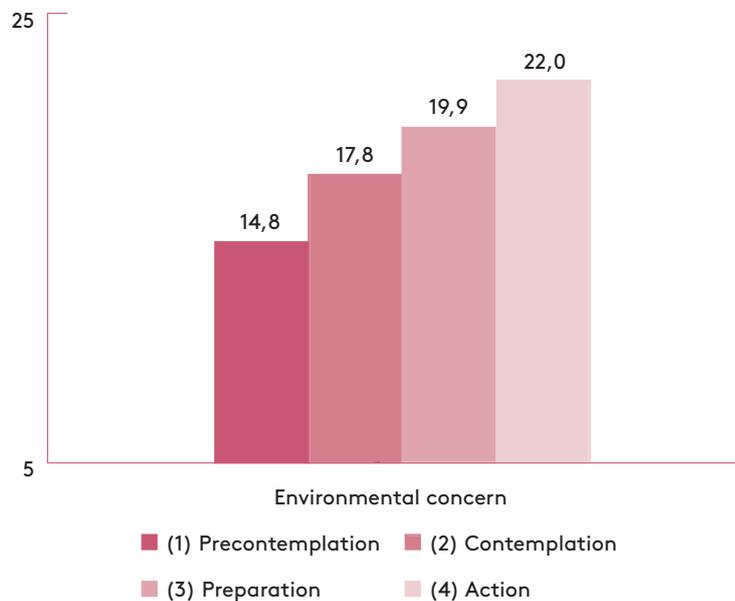
Chapter 9 – Stages of change

Figure 14: Materialistic values by stage of change



Regarding environmental concern, we see an increase in concern from Stage (1) to (4) – which goes hand in hand with the definition of the four Stages of Change, where the willingness and motivation to change increases from stage to stage. Figure 15 illustrates this.

Figure 15: Environmental concern by Stages of Change

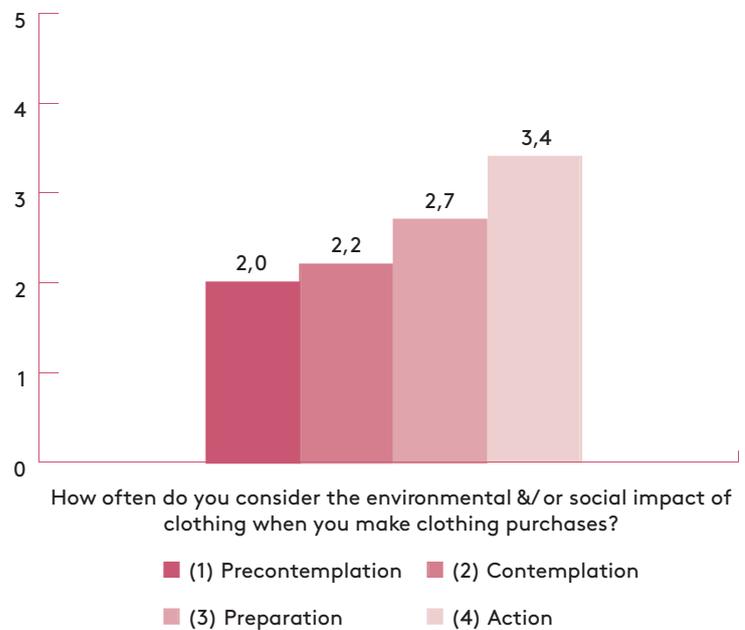


We also find an increase per stage of change in the consideration of environmental/social impacts in their purchasing decisions (Figure 16). Stage (4) clearly has the highest consideration of the impact their purchase

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decision might have on the environment or socially. This might be related to their commitment to act and buy sustainably and focus on no relapsing back to previous stages.

Figure 16: Environmental/social impact by Stages of Change



Label knowledge as well as label use is increasing from Stage (1) to Stage (4). Label knowledge and label use are closely related to the environmental concerns and the consideration of environmental/social impacts when purchasing clothing so that increase goes hand in hand with the previous mentioned increases (see figure 15. and 16.). Scepticism towards sustainable product claims is equal across all stages.

The Stages of Change and the use phase

The maintenance of clothes does not differ among the Stages of Change regarding the use of appliances such as washing machines, tumble dryers, flat irons or other methods such as dry cleaning or hand washing. Also, the washing temperature is the same for all stages.

How often clothes are worn before being washed differs only for shirts, t-shirts and tops. The frequency increases from stage to stage, being lowest at Stage (1) and highest at Stage (4), meaning people at Stage (4) wear their clothes for longer before washing. Trousers and skirts (excluding jeans) are worn about the same frequency for all stages.

Chapter 9 – Stages of change

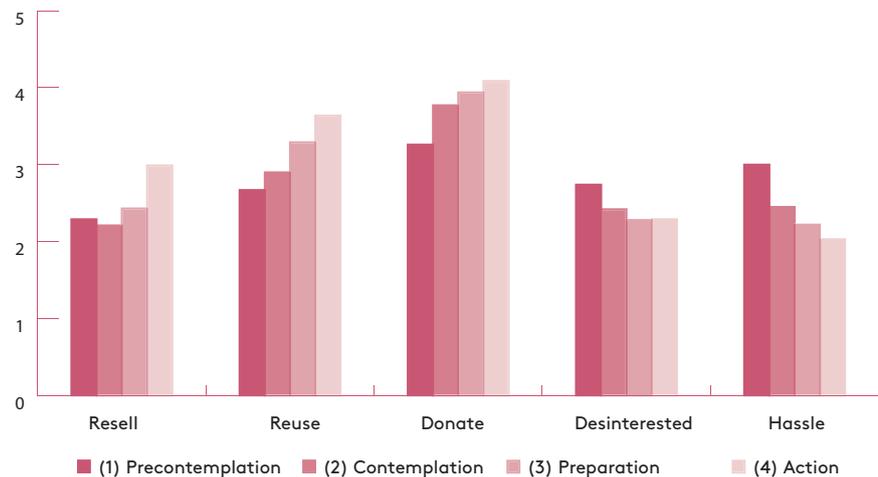
When it comes to mending their clothes, the difference between stages is visible, there is an increase from Stage (1) who “sometimes” mends their clothes, to Stage (4) who “often” mend their clothes. This is aligned with the stages commitment to sustainability, where Stage (4) has the commitment and aims to keep working towards it

The Stages of Change and the discarding phase

Looking first at textile recycling attitudes, differences between the Stages of Change become obvious (see Figure 17). Stage (4) has the most positive attitudes towards reselling, reusing and donating. The positive attitude towards those discarding strategies seems to increase from Stage (1) to Stage (4). The picture turns, however, when looking at the more negative dimensions and their attitudes, like “disinterest” and “hassle”: from Stage (1) to Stage (4) the scores drop. This shows that with more commitment towards Stage (4) the fewer consumers think of discarding as a hassle. It is a part of the process of being sustainable.

We do not find any differences between the different Stages of Change when it comes to the reasons for discarding garments.

Figure 17: Textile discarding strategies and attitudes by Stages of Change



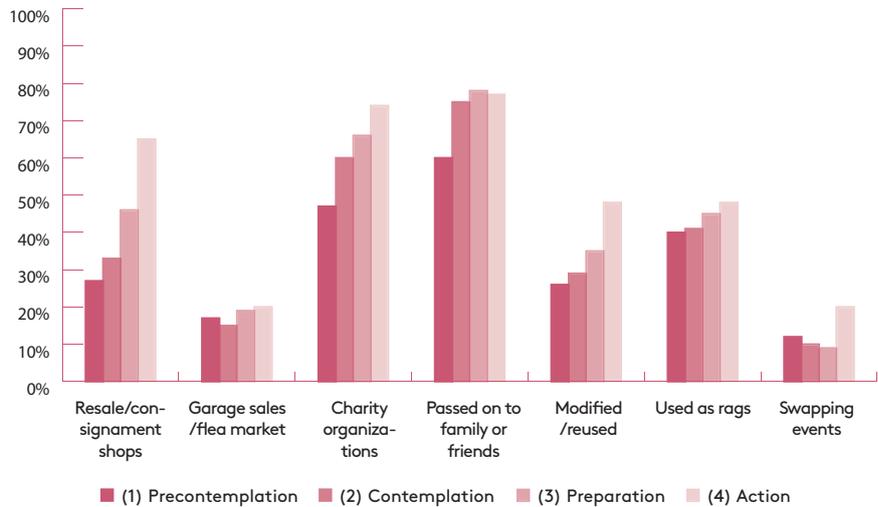
The next step is to look at the actual recycling behaviour. Here, we asked consumers which disposal method they actually used over the twelve months prior to answering this survey. Figure 18 provides an overview of used disposal channels by Stages of Change. “Passed on to family or friends” is the most popular disposal method. However, Stage (1) uses this channel less often compared to all other stages. That could potentially be due to their lack of awareness or interest in the subject as well as thinking of recycling/reusing as a hassle.

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When we look at channels like resale or consignment shops, charity organizations donation, modified and then reused garments, Figure 18 provides a clear picture: there is a high increase, from stage to stage, in the percentage of stage members who use one of the mentioned channels. There is also a slight increase from stage to stage in members using garments as rags.

Garage sales and flea markets as well as swapping events are generally only used by a small percentage of consumers, but swapping is more popular among members of Stage (4) compared to the members of the other stages.

Figure 18: Disposal methods used by Stages of Change



Summary: Stages of Change

Based on the “Stages of Change” segmentation approach, young Swedish consumers were grouped into four different Stages of Change. These four stages mirror the awareness, knowledge and willingness to act and buy sustainable.

While more traditional segmentation approaches frequently attempt to explain differences in consumers’ behaviour, abilities and motivation based on socio-demographics, it is interesting to note that we found no significant differences between the four groups with regard to socio-demographics. While socio-demographics appear to play a minor role, we observed differences between the stages in all consumption phases. Characteristic for Stage (4), the Action & Maintenance group, is that members of this group display a high environmental concern and more frequently consider environmental and/or social impact when buying clothes. This active group prefers second-hand outlets (e.g., second-hand shops, flea markets, eBay)

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or swapping. Less aware and active consumers on the other hand prefer buying clothes in shopping malls. The different modes of acquisition are not related to other behaviour, for example, the number of items bought, the time spent on a shopping trip or the monthly expenditures on clothing are about the same for all four Stages of Change.

Knowledge also varies between the Stages of Change: label knowledge increases from Stage (1) to Stage (4), which goes hand in hand with an increased use of those labels.

In the use phase, the Action & Maintenance group (4) mends clothes more often than any other group. Mending and modifying requires skills and knowledge. Consumers in Stage 4 also wear their shirts/t-shirts/tops more often before washing compared to the other stages. There are, however, no clear differences between the Stages of Change when it comes to washing behaviour in terms of frequency, temperature, detergent or use of different appliances.

In the disposal phase, higher stages prefer more often second-hand outlets like resale, consignment shops, or charity organizations while the lower stages show a higher disinterest in textile recycling or perceive it even as a hassle. Stage (4) is also the group that most often modifies and reuses clothes which is linked to the mending in the use phase. All stages except for Stage (1) pass regularly down their garments to family members and friends when they discard their garments.

The purchase behaviour and the discarding behaviour seem to go hand in hand. For instance, consumers in the Action & Maintenance group prefer second-hand outlets for purchasing new clothing, and at the same time, they also prefer the same outlets for discarding unwanted clothing. Additionally, they prolong the life of their clothing through mending and re-designing more often than any other stage. All in all, the action stage appears to engage more in acquiring and disposing activities, which require comparatively more time and effort, than less aware and active consumers. It is interesting to note that all stages spend about the same amount of time, money and frequency on purchasing clothes. This might suggest that a more sustainably minded fashion behaviour, as the one displayed by Action & Maintenance group members, does not necessarily mean compromising on being fashionable – but rather changing behavioural strategies.



Chapter 10

summary

Chapter 10 – Summary

10. Summary

This report describes the status quo of young Swedes fashion consumption behaviour, i.e. their purchasing, use & textile maintenance behaviour, as well as their disposal behaviour. A special focus is put on sustainability with regard to these fashion consumption phases. It is one of the first representative surveys on the topic with a sample size of 1,175 respondents aged 16 to 30 years.

Results on consumer behaviour, attitudes and knowledge around fashion and sustainability are presented along the three key consumption phases: purchase, use & maintenance and discarding. Here is a brief summary on the average Swedish consumer along the consumption phases and sustainability related issues.

In the purchase phase, the average young Swedish consumer ...

- spends about 687 SEK monthly on clothes;
- spends around 2.5 hours per shopping trip;
- shops at least once a month and prefers shopping malls over other outlets;
- shows a relatively high involvement in fashion;
- is price and price/quality sensitive;
- shows a balance between shopping for pleasure and utilitarian reasons;
- perceives the act of shopping clothes as more important than the mere possession of clothes;
- uses clothes as self-assurance tool and as expression of individuality.

In the use & maintenance phase, young Swedish consumers on average ...

- use washing machines, tumble dryers and flat irons frequently;
- and use dry cleaning to a lesser extent;
- wash their clothes on average at 40 degrees Celsius;
- wear their trousers or skirts about four times before washing;
- and wash t-shirts and similar clothing after about two times wear;
- mend their clothes sometimes.

In the discarding phase, the average young Swedish consumer ...

- has a positive attitude towards textile recycling;
- is extending clothes' life through reuse or donation.

With regard to sustainability related issues she/he is ...

- highly environmentally and socially conscious;
- sceptical towards sustainable product claims;
- not aware of environmental labels such as EU Flower, GOTS or Oeko-tex;
- more familiar with labels that are also used for other product categories such as Nordic Swan or Bra Miljöval.

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This high environmental and social awareness does, however, not translate into actual sustainable apparel purchase.

When it comes to being actively sustainable and staying committed to that choice, only 5.5% of young Swedish consumers fall into this category; a category which we term the Stage (4): Action & Maintenance group. 34% of young consumers are close to reaching this “action” stage, but they will choose sustainable options only if they are easily accessible, available and affordable. 45.9% of young consumers are aware of environmental and social issues but have a lack of knowledge and find it too hard and time consuming to change their behaviour and thought processes.

These results open an opportunity for promoters of sustainable fashion. When identifying the barriers that hinder the 45.9% from starting to act at all and the 34% of consumers to act in a more consistent sustainable manner, both groups could be nudged towards more sustainable fashion consumption. Appropriate nudges for the respective groups need to be developed and tested.

Consumers aware of sustainability issues, i.e., the Action & Maintenance group, differ from the average young Swedish consumers’ characteristics as sketched above. Those consumers who take their sustainability commitment seriously shop more frequently in second-hand shops and/or flea markets – despite buying the same amount of clothes, spending the same amount of time on their shopping trips and having similar expenditures. These consumers are more aware of eco-labels, know what they mean and actually use them in their purchasing decisions. Members of the Action & Maintenance group show about the same interest in fashion as the average consumer and also use clothes as expression of individuality and self-assurance. Regarding recycling behaviour, they have more positive attitudes towards reselling, reusing and donating clothes and are generally interested in textile recycling. More often than any other group do members of the Action & Maintenance group discard their unwanted clothes through resale, donation and swapping. Mending and modifying clothes is more widespread among the Action & Maintenance group.

This study has a few limitations. For once, it only looks at consumers aged between 16 and 30 years. Thus, findings cannot be generalized to other age groups. Further, it only presents a snapshot of fashion consumption in 2012. Follow up studies can uncover trends and developments with regard to fashion related behaviour and sustainability related attitudes and knowledge. This is especially important as markets are changing fast. For instance, since the completion of this survey, larger fashion retailers introduced in-store recycling schemes and the great attention paid by media to the

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Bangladesh factory disasters in early 2013 lead to collective agreements by major fashion industry players. Such developments and events do change the consumption environment and will ultimately also have an impact on consumers. Finally, this study is conducted only in one country. As most of the environmental and social issues associated with fashion production and consumption are not bound to the borders of one country but span further, it would be very fruitful to compare Swedish consumers to consumers in other countries and to learn about the barriers and drivers there.

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Appendix: Overview of scales of measurements used in questionnaire

	Scale/measurement	Source
Purchase phase (including pre-purchase) (Chapter 6)	Time spent for shopping	Own scale
	Expenditures for clothing	Own scale
	Number of items bought	Own scale
	Shopping frequency	Own scale
	Mode of acquisition	Own scale
	Role of price & price/quality relation	Scholderer, J., Brunsø, K., Bredahl, L. & Grunert, K. G. (2004) Cross-cultural validity of the food-related lifestyle instrument (FRL) within Western Europe. <i>Appetite</i> , 42, 197-211.
	Materialistic versus post-materialistic values	Richins, M. & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. <i>Journal of Consumer Research</i> , 19 (3), 303-316.
	Hedonic and utilitarian shopping values	Babin, B. J., Darden, W. R. & Griffin, M. (1994). Work and/or fun: Measuring hedonic and utilitarian shopping value. <i>Journal of Consumer Research</i> , 20, 644-656.
	Involvement with clothes	Michaelidou, N. & Dibb, S. (2006). Product involvement: an application in clothing. <i>Journal of Consumer Behaviour</i> , 5, 442-453.
	Functions of clothing	Tiggemann, M. & Lacey, C. (2009). Shopping for clothes: Body satisfaction, appearance investment, and functions of clothing among female shoppers. <i>Body Image</i> , 6, 285-291.
	Opinion leader (OL) and opinion seeker (OS)	Flynn, L. R., Goldsmith, R.E. & Eastman, J. K. (1996). The King and Summers opinion leadership scale: Revision and refinement. <i>Journal of Business Research</i> , 31, 55-64.
	Environmental concern	Thøgersen, J., Haugaard, P. & Olesen, A. (2010). Consumer responses to ecolabels. <i>European Journal of Marketing</i> , 44 (11/12), 1787-1810.
	Environmental/social concerns in purchasing decisions	Butler, S. M. & Francis, S. (1997). The effects of environmental attitudes on apparel purchasing behavior. <i>Clothing and Textiles Research Journal</i> , 15 (2), 76-85.
	Environmental apparel knowledge	Kim, H. S. & Damhorst, M. L. (1998). Environmental concern and apparel consumption. <i>Clothing and Textiles Research Journal</i> , 16 (3), 126-133.
Perceived availability, accessibility and affordability of sustainable clothing	Uusitalo, O., & Oksanen, R. (2004). Ethical consumerism: a view from Finland. <i>International Journal of Consumer Studies</i> , 28 (3), 214-221.	
Label knowledge and usage	Thøgersen, J., Haugaard, P. & Olesen, A. (2010). Consumer responses to ecolabels. <i>European Journal of Marketing</i> , 44 (11/12), 1787-1810.	
Scepticism of sustainable product claim	Mohr, L. A., Eroglu, D. & Ellen, P. S. (1998). The development and testing of a measure of scepticism toward environmental claims in marketers' communications. <i>Journal of Consumer Affairs</i> , 32 (1), 30-55.	

	Scale/measurement	Source
Use & maintenance phase (Chapter 7)	Maintenance behaviour	Own scale
	Washing temperature	Own scale
	Wearing frequency	Own scale
	Use of detergent	Own scale
	Mending behaviour	Own scale
	Scale/measurement	Source
Discarding phase (Chapter 8)	Reasons for discarding	Domina, T. & Koch, K. (1999). Consumer reuse and recycling of post-consumer textile waste. <i>Journal of Fashion Marketing and Management</i> , 3 (4), 346-359.
	Textile recycling attitudes	Domina, T. & Koch, K. (1999). Consumer reuse and recycling of post-consumer textile waste. <i>Journal of Fashion Marketing and Management</i> , 3 (4), 346-359.
	Disposal behaviour	Domina, T. & Koch, K. (1999). Consumer reuse and recycling of post-consumer textile waste. <i>Journal of Fashion Marketing and Management</i> , 3 (4), 346-359.
	Scale/measurement	Source
Stages of Change (Chapter 9)	Stages of Change	Mohr, L. A., Webb, D. J. & Harris, K. E. (2001). Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behavior. <i>Journal of Consumer Affairs</i> , 35 (1):45-72.

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MISTRA

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The goal is to encourage a systematic change of the Swedish fashion industry that contributes to a sustainable development of the industry and society. The program consists of eight projects which investigate new business models, design and innovative materials, sustainable consumption and customer behavior as well as policy issues. The partners involved in program include; H&M, Myrorna, Södra, I:Collect and Stockholms Läns Landsting.

Read more at www.mistra.org or www.mistrafuturefashion.com