Sustainable Consumption Decisions: An Examination of Consumer Cognition and Behavior

Dissertation

Mag. Verena Maria Gruber

ID: 0550856

PhD Advisors:

Prof. Bodo B. Schlegelmilch, WU Vienna, International Marketing Management

Prof. Michael J. Houston, Carlson School of Management, University of Minnesota
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To my dad, my role model

and

to my mum, my best friend
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Abstract (English)

People do not consume in a vacuum but each one of their decisions has ethical, social and environmental implications. A better understanding of their decision-making processes could entice various constituencies to consolidate their efforts and promote more sustainable consumption patterns.

This doctoral thesis investigates both behavioral and cognitive aspects of consumers’ decision-making processes with regard to sustainable products by means of qualitative and quantitative research studies. In a first step, it uncovers reasons put forward by consumers for not considering social or environmental aspects in their exchange relations with companies and classifies these reasons into core, central and peripheral factors depending on their salience and importance. Then, the thesis investigates consumers’ internal rationalization processes and their mechanisms of restoring their self-image as well as their image towards others. Findings show that consumers employ techniques of neutralization and referentializations to others in order to divert blame from themselves. Based on these qualitative insights, two quantitative studies are set up to gain more in-depth insights into consumers’ preference structures. In a first scenario, consumers’ inference formation about a product’s sustainability based on incomplete product descriptions is investigated by means of a Partial Least Squares structural equation model. Results indicate that other observable product attributes, such as price or country-of-origin, serve as proxy for evaluating the sustainability of a product. In a second scenario, consumers are offered generic product alternatives incorporating sustainability attributes as well as conventional ones, and asked to choose within paired comparisons their preferred option. By means of a log-linear Bradley Terry model, consumers’ preference structures are revealed and results show that consumers attach more utility to sustainability aspects when incorporated into low involvement or hedonic product categories.

This fine-grained examination provides important insights for academia and industry practice as it disentangles practically and theoretically relevant aspects (factors inhibiting the consideration of CSR, internalized justifications, proxy attributes for inference formations and object-specific covariates of sustainability attributes) of a complex and multifaceted
process and offers guidance for measuring these constructs. The implications of this thesis
are valuable for various constituencies: Among consumers, heightened awareness about
their own decision making processes can help to develop a moral maturity and a better
understanding of the consequences of their purchasing patterns. Companies are provided
with clear recommendations concerning the positioning of sustainable products and the
integration of sustainability aspects in new product development. By offering such benefits
in categories most sought by consumers, companies can contribute to a sustainable
development while at the same time securing profitability. For public policy makers, these
insights are pointing the way ahead to promoting more sustainable lifestyles and
counteracting anomic or undesirable tendencies.
Abstrakt (German)

Menschen konsumieren nicht in einem Vakuum sondern jede ihrer Entscheidungen hat ethische, soziale und ökologische Implikationen. Ein besseres Verständnis dieser Entscheidungsprozesse könnte verschiedene Parteien dahingehend motivieren, ihre Bemühungen zu konsolidieren und nachhaltigere Konsumationsmuster hervorzurufen.


Diese detaillierten Untersuchungen bieten wichtige Erkenntnisse für Wissenschaft und Industrie, da sie praktisch und theoretisch relevante Aspekte (Faktoren die als Gründe für die Nichtberücksichtigung von CSR genannt werden, internalisierte
1. Introduction

1.1. Background

In recent years, market participants at all levels, ranging from individuals to companies and public policy makers, became more aware of societal and environmental problems. Sustainability has increased in importance which is reflected in rising numbers of academic papers as well as corporate sustainability reports (Chabowski, Mena & Gonzalez-Padron, 2011). The concept itself is often defined by referring to the so called Brundtland Report about sustainable development: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, 43).

Given the fact that consumers’ current lifestyles, especially in industrialized countries, largely impact this ability, the debate on sustainability has come to revolve primarily about consumption patterns. Sustainable consumption therefore focuses on the “economic activity of choosing, using, and disposing of goods and services and how this can be changed to bring social and environmental benefit” (Haron, Paim & Yahaya, 2005, 427). This dissertation investigates the choosing aspect in detail, because “every time someone makes a decision about whether (or not) to purchase a product or service there is the potential for that decision to contribute to a more or less sustainable pattern of consumption” (McDonald et al., 2006, 516). Consumers make several purchasing decisions each day and the consideration of social and environmental aspects within these decision-making processes could contribute to a more sustainable development.

As mentioned above, academic research has increasingly sought to provide insights into consumers’ responses to sustainability. Concern regarding responsible and sustainable corporate practices has exponentially grown among consumers (Freestone & McGoldrick, 2008), who regularly take these issues into account when evaluating companies and their products (Cone, 2010; Taneja, Taneja, & Gupta, 2011). This is also true for the “twin idea”
(Hildebrand, Sen, and Bhattacharya 2011, 1353) of corporate social responsibility (CSR)\(^1\), which similarly focuses on environmental and social aspects. However, extant research primarily takes a firm-oriented perspective. Accordingly, CSR deals more with concrete efforts and initiatives pursued by companies, and is formally defined by the European Commission as “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis” (European Commission, 2001).

1.2. Consumer Decision Making with Regards to Sustainable Products

According to the United Nations, current consumption patterns, especially in industrialized countries, pose a major threat to the Earth’s environmental capacity (UNEP, 2005b). With each decision, consumers can potentially contribute to a more sustainable development. Consumers’ decision-making with respect to socially and environmentally responsible behavior has been identified as a highly complex, multidimensional process involving intellectual, moral and pragmatic components. As a result, intentions and behavior are not connected in a simplistic and straightforward way but involve a translation process susceptible to various influences (McGregor, 2008). Furthermore, consumers are confronted with an extensive array of products they can choose from. The very decisions that they make further impact technological advances and companies’ motivation to innovate. After all, each consumer decision supports a specific company and thus their respective corporate practices.

Assessing the extent to which corporate practices influence consumers’ choice for their product offerings is a difficult endeavor. Negative information, such as the often cited sweatshop scandal of Nike, has been shown to have a much stronger impact on decision-

\(^1\) Within this dissertation, the terms sustainability and corporate social responsibility (CSR) will be used interchangeably.
making than positive information (Biehal & Sheinin, 2007; Sen & Bhattacharya, 2001). If people genuinely care about social and environmental aspects, as widely reported within survey research (Cone, 2010), they should also take these aspects into account when making purchasing decisions. There is, however, evidence indicating that market shares of sustainable products do not exceed 4% (UNEP, 2005a). A common problem of most studies researching the link between CSR or sustainability and consumer behavior is the assumed or artificially induced awareness about these issues. The question how consumers perceive socially responsible companies with regard to their specific product offerings and whether they integrate these aspects into their decision-making, has so far not been examined in an unprompted way and without specifically directing consumers towards these topics.

The first study therefore aims at understanding whether corporate social responsibility practices also affect the decision-making process of consumers with regard to a company’s products. Given the objective of gaining insights without introducing artificial awareness, a qualitative design has been identified as the most appropriate research approach. Within in-depth interviews with consumers, reasons for not considering CSR are uncovered and incorporated into a hierarchical process model.

The strength of consumers’ positive attitudes about sustainability is not mirrored in their actual behavior and this paradox puzzles both academia and industry practice. The underlying cognitive processes precipitating a contradictory behavior have not been investigated so far, at least not in a marketing or purchasing context. Research in other areas such as ego psychology or even crime and delinquency has provided valuable theories about defense mechanism in relation to attitude-inconsistent behavior. Taking a marketing perspective, the question is how consumers can deliberately engage in a behavior which is not in line with their positive attitudes about sustainability. This attitude-behavior gap has been widely reported (Roberts, 1996) and still confounds both academic and commercial research.

The second study therefore aims to provide a clearer picture of consumers’ internalized cognitive processes when behaving in an attitude-inconsistent way. By means of a multi-method qualitative research design, the applicability of defense mechanism found in
literature on juvenile delinquency is investigated and consumers’ justifications are conceptualized in a Cycle Model depicting the process of attitude and behavior alignment.

Additionally to understanding consumers’ responses to sustainable products and given the fact that market shares for these goods are still relatively small (UNEP, 2005b), the question arises whether consumers also assess sustainability issues without being provided relevant information. Ehrich and Irwin (2005) found that consumers, even very conscientious ones, would rather ignore ethicality aspects of certain product offerings than specifically asking for it. However, besides asking, consumers could also form implicit theories about whether a specific product is sustainable or not. In an era of increasing public attention towards sustainability, it is likely that these aspects are also mirrored in consumers’ inference formations.

Within the third study, the objective is thus to assess whether consumers make implicit theories about a product’s sustainability and if yes, how this inference process looks like. Within a qualitative prestudy, four highly important and salient proxy attributes are identified. These attributes have the potential to entice inference formations about sustainability and are further investigated within a quantitative design.

In some instances, sustainability attributes are indeed observable to consumers as in the case of Fair Trade or organic products. Research has shown that consumers deliberately look for these aspects and opt for sustainability attributes rather than traditional functional ones (Kotler, 2011). What is astonishing, though, is the fact that sustainable products are more prominent in some product categories than in others (UNEP, 2005b). Luchs et al. (2010) found that sustainability can be a liability and negatively influence consumer choice when being integrated in a product that is strength-related (they use as example a car shampoo). Contrary, when being integrated into a gentleness-related product (such as baby shampoo), sustainability increases consumers’ preferences. Rather than asking whether consumer value sustainability attributes (Auger et al., 2007), the question is when to they value sustainability?
The objective of study four is to assess in which product categories or attribute bundles, sustainability increases consumer preference. Within an experimental design involving paired comparisons between generic product alternatives, consumers’ preferences for sustainability across high- and low-involvement as well as hedonic and utilitarian product categories are investigated. Furthermore, demographic criteria of potential target consumers are identified.

Taken collectively, there is a growing body of research examining consumers’ responses to sustainability. Nevertheless, important aspects regarding consumers’ justifications, their inference formations and appreciation of sustainability across different product categories, have not been investigated so far. Accordingly, this dissertation has formulated specific research questions aimed at closing these gaps.

1.3. Outline of the Dissertation

This dissertation entails four independent but interrelated studies, which are presented in the following chapters. Given the very specific focus of these studies, each one of them is outlined with a separate heading, introduction, literature background and conclusion. The final discussion section in chapter 6 will synthesize the main findings and put them in relation to each other.

Chapter 2 presents the first study “‘Why Don’t Consumer Care About CSR?’ – A Qualitative Study Exploring the Role of CSR in Consumption Decisions”. Within this research, factors put forward by consumers for not considering CSR or sustainability aspects within their purchasing decisions are investigated. Chapter 3 and the study “Moral Lapses and Consumer Anomie: How Techniques of Neutralization Legitimize Norm- and Attitude-Inconsistent Consumer Behavior” build on chapter 2. However, rather than focusing on specific product related factors, it deals with consumers’ employment of justifications and internal rationalization mechanisms when ignoring sustainability issues in consumption
decisions. Chapters 4 and 5 discuss consumers’ reactions towards sustainability in product attribute bundles. More specifically, the study “Inferential Evaluations of Sustainability Attributes: How Consumers Imply Product Information” presented in chapter 4 examines consumers’ inference formation about sustainability attributes when being confronted with incompletely described product offerings. In contrast, chapter 5 and the study “Consumers’ Choice for Sustainability Attributes: Modeling Preferences In Multivariate Paired Comparisons” take a product incorporating sustainability attributes as starting point and assess the impact of these sustainability attributes on consumers’ preferences in different product categories. The individual studies have already been presented at various academic conferences; after the completion of the thesis, it is envisaged to turn them into papers to be published in academic journals.

An overview of each of the study’s objective, research methodology and data is provided in Table 1.
<table>
<thead>
<tr>
<th>Chapter 2</th>
<th>Chapter 3</th>
<th>Chapter 4</th>
<th>Chapter 5</th>
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<tbody>
<tr>
<td>Title</td>
<td>&quot;Why Don’t Consumers Care About CSR?&quot;: A Qualitative Study Exploring the Role of CSR in Consumption Decisions</td>
<td>Moral Lapses and Consumer Anomie: How Techniques of Neutralization Legitimize Norm and Attitude Inconsistent Consumer Behavior</td>
<td>Inferential Evaluations of Sustainability Attributes: How Consumers Imply Product Information</td>
</tr>
<tr>
<td>Research Objective and Main Findings</td>
<td>Investigating reasons put forward by consumers for not considering social or environmental aspects when purchasing products. Reasons are categorized into core, central and peripheral factors depending on their ability to inhibit the consideration of sustainability.</td>
<td>Understanding how consumers justify decisions contradicting principles of sustainability towards themselves and other societal members by employing techniques of neutralization. Results show that by means of these defense mechanisms, consumers can align their attitudes and contradicting behavior.</td>
<td>Examining consumers’ perceptions and inferences about sustainability when being confronted with incomplete product descriptions. Proxy attributes which serve as triggers for inferences about sustainability are identified, and incorporated into a structural path model.</td>
</tr>
<tr>
<td>Research Design and Methodology</td>
<td>Qualitative Paper</td>
<td>Qualitative Paper</td>
<td>Quantitative Paper</td>
</tr>
<tr>
<td>Data</td>
<td>22 in-depth interviews</td>
<td>4 focus groups (total of 29 participants) 23 in-depth interviews</td>
<td>807 respondents to an online survey</td>
</tr>
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Table 1: Overview of the Dissertation
Abstract

There is an unresolved paradox concerning the role of corporate social responsibility (CSR) in consumer behavior. On the one hand, consumers demand more and more CSR information from corporations. On the other hand, research indicates a considerable gap between consumers’ apparent interest in CSR and the limited role of CSR in purchase behavior. This paper attempts to shed light on this paradox by drawing on qualitative data from in-depth interviews. The findings show that the evaluation of CSR initiatives is a complex and hierarchically-structured process, where consumers distinguish between core, central, and peripheral factors. This paper describes these factors in detail and explains the complexity of consumers’ assessment of CSR. These insights then serve as a basis for discussing the theoretical and managerial implications of the research findings. To this end, the paper contributes to a better understanding of the role of CSR in consumption decisions.
2.1. Introduction

During the past decade, consumers have become progressively more interested in corporate social responsibility (Carrigan & Attalla, 2001; Maignan, 2001). Several reasons for this have been advanced: On the supply side, firms are increasingly engaging in CSR activities and place more emphasis on communicating their CSR efforts while, on the demand side, consumer advocate groups are highlighting irresponsible corporate behavior and calling for boycotts (Snider, Paul, & Martin, 2003). The increased attention placed on CSR also seems to affect consumers’ purchase intentions, as a number of surveys and experiments appear to show (e.g. Brown & Dacin, 1997; Mohr & Webb, 2005; Sen & Bhattacharya, 2001).

However, despite consumers’ interest in CSR and its ostensive impact on purchase intention, in reality, CSR still only plays a minor role in consumption decisions (Mohr et al. 2001). This challenges many findings based on experiments and survey research, which suggest that consumers do take a company’s CSR initiatives into account when making purchasing decisions. Possible explanations point to two shortcomings in this stream of research. First, the experimental setting of many studies induces artificial awareness for CSR. Thus, while such studies offer some useful insights, the effect of CSR on actual consumer behavior may not be fully captured. Second, most of these studies tend to suffer from a social desirability bias: When being asked, consumers declare their willingness and motivation to consider CSR, but when it comes to real consumption, only very few take account of CSR (Auger & Devinney, 2007; Timothy M. Devinney, Auger, & Eckhardt, 2010). The discrepancy between reported intentions and actual behavior calls for a better understanding of the limited role CSR plays in purchase decisions. Our paper seeks to shed light on this issue and attempts to provide a better understanding of the process by which consumers integrate their perceptions of CSR initiatives as a purchase criterion. To this end, we use qualitative data from in-depth interviews. The findings show that the evaluation of CSR initiatives is a complex and hierarchically-structured process during which consumers distinguish between core, central, and peripheral factors.

The paper is organized as follows: The next section discusses previous work on corporate social responsibility and consumer behavior and identifies some of the common limitations
inherent in extant research. Subsequently, the methodological approach is explained, and the findings are presented. Finally, the implications of the findings are discussed, and avenues for further research are suggested.

2.2. Background

2.2.1. Definition of Corporate Social Responsibility

The concept of corporate social responsibility has been characterized as elusive (Smith & Langford, 2009), broad and complex (Mohr, Webb, & Harris, 2001), malleable (T. Devinney, 2009), and blurry and fuzzy (Geoffrey, 2001). The basic idea behind it is straightforward: Corporations are responsible for more than simply making a profit (Godfrey & Hatch, 2007). However, achieving a clear and common understanding of what these corporate responsibilities are has proven to be difficult (McWilliams, Siegel, & Wright, 2006b). Many scholars have tried to pin down the concept of CSR (see the in-depth literature review by Dahlsrud (2008)), but a unified definition is still missing (e.g. Crane, Matten, & Spence, 2008; Godfrey & Hatch, 2007; McWilliams, Siegel, & Wright, 2006a; Mohr, et al., 2001; Smith & Langford, 2009; Van Marrewijk, 2003). Devinney (2009) suggests that there are two kinds of views: those with a narrow focus, which perceive monetary profitability within the framework of the law as the sole responsibility of a company, and those with a broader view, perceiving companies as organizations with a much broader set of obligations. Most definitions are, however, positioned on the continuum somewhere in between these two views (Devinney, 2009). This paper follows the broader view of corporate social responsibility in accordance with the European Commission, which has defined CSR as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (European, 2001). However, even the definition by the European Commission is company-centric. It gives an idea of what CSR means to corporations, but it remains unclear what the concept conveys to consumers. This is discussed in the following section.
2.2.2. Consumer Responses to CSR

Impact of CSR on Product and Company Evaluations

Several studies show that consumers take their commitment to CSR initiatives into account when evaluating companies and products. In both cases, negative CSR information has a much stronger effect on the evaluation than positive news (Biehal & Sheinin, 2007; Brown & Dacin, 1997; Marin & Ruiz, 2007; Sen & Bhattacharya, 2001). Moreover, consumer identification with the company plays a role when evaluating a company. The more consumers identify themselves with a company, the more positively they assess it. Put differently, a company’s CSR position leads to consumer identification with the company, which in turn leads to better company evaluations (Sen & Bhattacharya, 2001).

Consumers’ Perception of Motives for Engaging in CSR

Consumers’ perceptions of companies’ motives for engaging in corporate social responsibility also play an essential role in consumer responses to the concept (Ellen, Webb, & Mohr, 2006; Vlachos, Tsamakos, Vrechopoulos, & Avramidis, 2009). Ellen et al. (2006) identified different types of attributions: other-centered (stakeholder-driven and values-driven attributions), self-centered (strategy-driven and egotistically-driven attributions), and win-win. Other-centered attributions refer to consumers’ perceptions that companies feel morally committed and see it as their responsibility to help; self-centered ones depict companies engaging in CSR for strategic reasons (e.g. to increase their profits). Most consumers ascribe mixed motives to corporate engagement in CSR and view companies in a positive light when they credit CSR-related efforts with a combination of values-driven and strategic attributions (Ellen, et al., 2006; Vlachos, et al., 2009). Vlachos et al. (2009) show that value-driven attributions positively affect trust, while stakeholder-driven, egoistically-driven, and strategy-driven attributions have a negative impact or no impact at all. Similarly, Becker-Olsen et al. (2006) conclude that social motivation is essential for a positive consumer reaction, while profit-motivated initiatives have a negative impact.
Consumers’ Awareness and the Communication of CSR

A common problem of most studies researching the link between CSR and consumer behavior is an assumed or artificially-induced awareness of CSR. However, consumers generally have a low level of awareness about what CSR is (Pomering & Dolnicar, 2009; Sen, Bhattacharya, & Korschun, 2006). Nonetheless, when consumers are made aware of what CSR is, it appears that CSR does lead to positive attitudes and stronger behavioral intentions towards buying products from a socially-responsible company (Pomering & Dolnicar, 2009; Sen, et al., 2006). Hence, communicating CSR activities is essential to enhancing CSR awareness. In particular, communication channels that are not directly controlled by the corporation play a major role in CSR communication, as does the type of CSR program (namely institutional, as opposed to promotional) (Pirsch, Gupta, & Grau, 2007; Pomering & Dolnicar, 2009). Institutional CSR programs “provide a comprehensive approach to CSR, attempting to fulfill a company’s social obligations across all stakeholder groups and touching on all aspects of the company” (Pirsch et al. 2007, p. 126). Companies offering institutionalized CSR programs generate CSR policies for all stakeholders and attempt to satisfy their moral obligations. This type of program has a greater impact on customer loyalty, attitudes towards the company, and purchase intention than do promotional CSR programs, which are targeted at selling products (Pirsch, et al., 2007).

CSR and Purchase Intention

The type of CSR activity, consumers’ support of the initiative, and their beliefs about the tradeoffs a company makes for the sake of its CSR play a crucial role in consumers’ reactions to CSR activities (Sen and Bhattacharya 2001). Furthermore, the influence of CSR on consumers’ purchase intention can be direct or indirect. The effect is indirect when a corporate context for purchase intention is created, that is when consumers know the

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company and its CSR efforts. However, a company’s CSR actions can also have a direct influence on the attractiveness of its products. Here, a company’s CSR initiatives directly affect purchase intention, as the CSR initiative corresponds to the consumer’s CSR beliefs and his/her support for the initiatives (Sen & Bhattacharya, 2001). Consumers who respond more positively to CSR activities have also been found to take more responsible purchase decisions and act more responsibly in their disposal behavior (Mohr & Webb, 2005).

Extant research also showed that CSR only has a positive effect on consumers’ purchase intention when consumers are interested in the CSR activity and support it. Moreover, there must be a good fit between the company’s CSR activity and its business. Furthermore, irresponsible corporate behavior has been found to have a greater impact on consumers’ purchase intention than responsible behavior (Bhattacharya & Sen, 2004).

However, Mohr et al. (2001) draw attention to the fact that only a small segment of consumers uses CSR as a purchasing criterion on a regular basis. Building on qualitative data, Mohr and colleagues identified four different groups of consumers: (1) pre-contemplators, (2) contemplators, (3) action-oriented consumers, and (4) maintainers. Pre-contemplators do not base their consumption decisions on CSR; contemplators think about CSR, but do not actually act on it; action-oriented consumers sometimes use CSR as a purchase criterion; and maintainers are committed to considering CSR when they buy. Most respondents (pre-contemplators and contemplators) have positive attitudes towards companies who engage in corporate social responsibility activities, but few (action-oriented consumers) consider CSR to be an important purchase criterion. Only a minority (21%) use a company’s CSR position as a purchase criterion sometimes or on a regular basis (Mohr, et al., 2001). Current figures of fair trade are in line with this finding, showing that fair trade sales account only for 1% of global trade (Siegle, 2009).

Taken collectively, a growing body of literature focuses on CSR and consumer behavior. While the findings of this research show some impact of CSR on consumers’ product and company evaluation, they demonstrate the limited impact of CSR on purchase intention. Moreover, the research points to the importance of the perceived motives of CSR and, in particular, to the central role of consumer awareness and communication of CSR. Similar results have been obtained from a related stream of research on “the ethical consumer”.

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However, in contrast to the literature on CSR and consumer behavior, the discourse about ethical consumption is already further advanced and focuses on the identification of antecedents of ethical consumption. A recent example of this research stream is a contribution by Bray et al. (2011), who identify exogenous (consumer characteristics) and impeding variables in ethical consumption and their impact on various consumer behavior outcomes (e.g. boycott, self-interest). Our paper widens this discussion by moving beyond individual (ethical) product offers to the strategic level, i.e. CSR initiatives. Consequently, we attempt to shed light on the role a company’s CSR activities plays in purchase decisions by exploring the consumers’ evaluation process of CSR perceptions as a purchase criterion.

2.3. Qualitative Research Approach

As this study aims to understand the meanings that actions by individuals convey rather than to predict their behavior and explore and understand perceptions, beliefs, and values, qualitative inquiry seems to be most appropriate (McCracken, 1988). Moreover, qualitative methods are considered most helpful to examine situations where claimed attitudes and actual behavior diverge (Belk, Devinney, & Eckhardt, 2005) and where a real-life context is important (Sinkovics, Penz, & Ghauri, 2005; Sykes, 1990). Given these reasons, in-depth interviews with consumers seem to be most advisable, as they enable researchers to gain “a more accurate and clear picture of a respondent’s position or behavior” (Ghauri & Gronhaug, 2002, p.101) and to clarify and calmly elaborate on interesting answers. More precisely, we use an exploratory approach, aimed at developing a grounded understanding of consumers’ evaluation of their perceptions of a company’s CSR position during the purchasing process.

2.3.1. Data Collection

Since the investigation of ethics-related topics is vulnerable to the social desirability bias, great care must be taken when collecting data (Brunk, 2010a; Mohr, et al., 2001). Hence, to
reduce social desirability bias, several measures have been taken: We decided to use face-to-face interviews over focus groups in order to minimize self-presentational concerns (Wooten & Reed II, 2000) and to reduce the pressure on the interviewees to “do and say the right thing” (Bristol & Fern, 2003). The interviews were conducted in individuals’ homes to make them feel comfortable. The relaxing and familiar atmosphere, as well as the open, yet focused interview style of semi-structured interviews offered the interviewees a trusted environment, encouraging them to answer openly and honestly. Moreover, before the interview, the participants were advised that the focus of the study was to investigate their opinions and beliefs and that there were no right and wrong answers to the interview questions. For particularly delicate questions, we used protective techniques, asking our respondents to interpret the behavior of other consumers (Fischer, 1993). Being cognizant of this issue and despite taking measures to prevent social desirability, it cannot be completely eliminated. However, we have the impression that the respondents answered openly and honestly and that social desirability bias was reduced as much as was possible in this type of study.

The interview guidelines for the in-depth interviews were carefully prepared and, after pretesting, slightly adapted. At the beginning of the interviews, the study’s real purpose was not revealed to participants. The questions were designed from general to more specific inquiries that followed well-established interview procedures (Bernhard, 1988). The realization of the interviews was as follows: First, participants discussed the companies and shops they liked and which products they had bought most recently. Then, they were asked why they visit those particular shops and which purchasing criteria are important to them. In a next step, the interviewees were shown visual stimuli representing the logos of predetermined companies. Again, they were asked to select those companies they like and/or where they buy products. Then, consumers were asked why they like and why they shop at these companies. Subsequently, the discussion moved towards the CSR policies and initiatives of these companies. After that, the conversation was directed towards the question of whether consumers can influence a company’s behavior. Boycotts and support for socially-responsible companies were debated. Finally, the real purpose of the study was revealed and discussed.
A total of 22 individual interviews were conducted. Interviewing continued until redundancy was reached, implying theoretical saturation. The interviews took place in a Western European country in fall 2009 and spring 2010. To this end, we expand the research context and provide a contrast to the US-dominated research on CSR and consumer behavior. The interviews lasted between 30 to 105 minutes. With the participants’ permission, each interview was audiotaped and transcribed, resulting in 575 pages of text. Furthermore, interview descriptions and observation notes were taken.

2.3.2. Sample
As qualitative research focuses on in-depth exploration, a small but diverse sample is recommended. McCracken (1988) advocates that eight long interviews are a sufficient basis for qualitative research projects. In order to obtain a diverse and interesting interviewee selection, we employed theoretical sampling. This means that we chose consumers who could inform us about the research problem addressed in this study (Creswell, 2007; Glaser & Strauss, 1967). The main underlying dimension for purposive sampling was consumers’ attitudes towards CSR, that is varying levels of interest and different attitudes towards CSR-related issues such as organic products, fair trade, etc. However, the objective was also to gather a balanced sample in terms of consumption habits. Consequently, consumers with different shopping habits were selected, ranging from price-conscious to quality shoppers. Furthermore, we chose consumers with diverse backgrounds with regards to demographic criteria such as age, gender, level of education, occupation, and marital status. Thus, our sampling strategy was driven more by theory than by representativeness. Concerning the selection process we identified interviewees using two well-established approaches (e.g. Brunk, 2010b): First, the majority of interviewees were selected by convenience. Second, a few interviewees were recommended by participants (snowballing). In these cases participants were asked if they know consumers with a certain level of interest in CSR and consumption habits. If there was an interesting match, the respondent was asked to make the contact to the potential interviewee and requested not to indicate the real purpose of the study but to find out whether this person would be willing to talk about his/her
consumption habits. The detailed sample description and interviewee characterization is shown in Table 2.

<table>
<thead>
<tr>
<th>Interview #</th>
<th>Gender</th>
<th>Age</th>
<th>Consumer characterization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview 1</td>
<td>Female</td>
<td>42</td>
<td>This interviewee has a high school degree and is employed as a medical technical assistant. She is married and has two children, lives in a rural area. She has an average interest in CSR and fair trade, but not as a last consequence.</td>
</tr>
<tr>
<td>Interview 2</td>
<td>Male</td>
<td>52</td>
<td>The respondent has completed a vocational training and is employed in public service. He is married, has two children, and lives in a rural area. With regard to CSR, he questions companies’ philosophies and expects that they behave responsibly.</td>
</tr>
<tr>
<td>Interview 3</td>
<td>Female</td>
<td>62</td>
<td>She has a vocational training and is currently retired (from being a seamstress) and a housewife. She is married, has two children, and lives in a rural area. Generally, she is not interested in CSR. When purchasing products, high quality is key.</td>
</tr>
<tr>
<td>Interview 4</td>
<td>Female</td>
<td>25</td>
<td>This interview partner has a university degree in politics and is currently unemployed. She is single and lives in a rural area. Even though she generally has a positive attitude towards CSR, she is critical when it comes to specific initiatives. When shopping, she mainly looks for high-quality products.</td>
</tr>
<tr>
<td>Interview 5</td>
<td>Male</td>
<td>35</td>
<td>The civil servant has a high school degree, is married, and lives in a rural area. When shopping, price is the most important criterion, followed by quality. He attaches great importance to experience of peers. The interviewee has an average interest in CSR.</td>
</tr>
<tr>
<td>Interview 6</td>
<td>Male</td>
<td>49</td>
<td>This interviewee has completed a vocational training, is self-employed, and works as a farmer. He is single and has one child. He is interested in CSR initiatives, especially the ones focusing on local community and environment.</td>
</tr>
<tr>
<td>Interview 7</td>
<td>Female</td>
<td>48</td>
<td>Our seventh respondent is a housewife (and former teacher) and has a high school degree. She is married, has four children, and lives in a rural area. She is quality-conscious; price is not really a criterion. She mainly buys organic and fair trade products and products from local farmers.</td>
</tr>
<tr>
<td>Interview 8</td>
<td>Female</td>
<td>65</td>
<td>This former surgeon has a university degree and is currently retired. She is divorced, has three children, and lives in an urban area. She always buys organic and/or fair trade products and cares greatly about the environment.</td>
</tr>
<tr>
<td>Interview 9</td>
<td>Female</td>
<td>43</td>
<td>This respondent works as a freelance university lecturer and holds a PhD in business. She is married, has three children, and lives in an urban area. She cares about environmental protection, buys organic products, and is partly skeptical about the true motives of companies' CSR engagement.</td>
</tr>
</tbody>
</table>
| Interview 10 | Female | 60  | She has a high school degree and is self-employed, working as a trainer. She is divorced, has one child, and lives in an urban area. She is rather price-
<table>
<thead>
<tr>
<th>Interview</th>
<th>Gender</th>
<th>Age</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview 11</td>
<td>Male</td>
<td>23</td>
<td>This geography student has a high school degree, is single, and lives in an urban area. This interviewee prefers fair trade and organic products.</td>
</tr>
<tr>
<td>Interview 12</td>
<td>Male</td>
<td>55</td>
<td>Our twelfth interview partner is a craftsman and has completed a vocational training. He is divorced, has two children, and lives in an urban area. In purchasing situations, he does not care about CSR. However, he questions companies’ philosophies and expects that they behave responsibly.</td>
</tr>
<tr>
<td>Interview 13</td>
<td>Male</td>
<td>37</td>
<td>After finishing vocational training, this interviewee became a locksmith. He is single and lives in an urban area. He is not at all interested in CSR and is very price-conscious.</td>
</tr>
<tr>
<td>Interview 14</td>
<td>Female</td>
<td>23</td>
<td>This student has a high school degree, is single, and lives in an urban area. She has an average interest in and knowledge of CSR initiatives. She occasionally buys fair trade products, but only if the price is acceptable.</td>
</tr>
<tr>
<td>Interview 15</td>
<td>Male</td>
<td>34</td>
<td>This respondent has a high school degree and is currently enrolled at university. He is single and lives in an urban area. He is very critical and questions everything (including price and quality). He generally considers CSR to be important, but is very skeptical.</td>
</tr>
<tr>
<td>Interview 16</td>
<td>Female</td>
<td>22</td>
<td>She is a student with a high school degree, single, and lives in an urban area. She is not very interested in CSR, but rather price-conscious and would also buy products from companies known for bad practices. In her opinion, it is the government’s responsibility to take care of corporate practices and not that of consumers.</td>
</tr>
<tr>
<td>Interview 17</td>
<td>Male</td>
<td>41</td>
<td>As a high school teacher in arts, this interviewee holds a university degree. He is married and lives in an urban area. He regularly buys organic and local products and is critical of MNE’s practices. He has an average interest in CSR, but does not consider it in purchasing decisions.</td>
</tr>
<tr>
<td>Interview 18</td>
<td>Female</td>
<td>51</td>
<td>This woman is a medical technical assistant, has a university degree, one child, and is widowed. She prefers organic and healthy ingredients when shopping for groceries. However, her overall interest in CSR is rather low, and she is very skeptical about CSR initiatives. She rarely buys fair trade products, but also considers price when there are special offers.</td>
</tr>
<tr>
<td>Interview 19</td>
<td>Male</td>
<td>45</td>
<td>Our next respondent is a cook and has a high school degree. He is divorced and lives in an urban area. He generally considers CSR to be a good thing, but questions most initiatives because he assumes that the real motives are profit-driven. Due to his rather low income, he is very price-sensitive.</td>
</tr>
<tr>
<td>Interview 20</td>
<td>Male</td>
<td>25</td>
<td>This interview partner has a university degree and works as a consultant. He is concerned about CSR aspects and thinks that consumers have a responsibility as well. He is critical and questions companies’ CSR engagement. (They sometimes appear like a marketing ploy to him.). Therefore, he occasionally seeks more information, e.g. which criteria have to be fulfilled for certain labels, etc.</td>
</tr>
</tbody>
</table>
| Interview 21 | Female | 21 | She is a graduate student and holds a bachelor’s degree in social sciences. She is single and lives in an urban area. Even though she has restricted financial resources, she tries to consider fair trade and local production
when buying products. If she buys from companies where she is unsure about their practices, she has a bad conscience.

<table>
<thead>
<tr>
<th>Interview 22</th>
<th>Male</th>
<th>22</th>
</tr>
</thead>
<tbody>
<tr>
<td>This respondent has a high school degree and is currently enrolled at university. He is single and lives in an urban area. When purchasing products, he pays attention to quality and price. He is also an impulse buyer and influenced by packaging. He does not really consider CSR in purchasing decisions and feels poorly-informed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Sample Description

2.3.3. Data Analysis

The basic steps in the analysis of qualitative data consist of coding the data, combining the codes into broader categories and themes, and interpreting the results (Creswell, 2007; Sinkovics, et al., 2005). The analysis developed gradually during the data collection process (Strauss & Corbin, 1990); early analysis of the first transcript enabled the discussion guidelines to be refined for subsequent interviews. After all the data had been collected, the final analysis was conducted. As recommended by Glaser and Strauss (1967), the data analysis was an iterative process of reading, coding, discussing the coding with colleagues, and starting again with the reading. Relevant sections of the transcripts were carefully reread and analyzed in the search for patterns and themes. This analysis employed various procedures of categorization, abstraction, comparison, dimensionalization, integration, iteration, and refutation (Spiggle, 1994).

2.4. Findings: Factors Influencing the Assessment of CSR as a Purchasing Criterion

Overall, the interviewees agreed upon the minor importance of CSR compared to other purchase criteria such as price, quality, brand, country of origin, or service. This is in accordance with prior research, which shows that CSR is not “at the top of many consumers’ lists” (Beckmann, Christensen, & Christensen, 2001; Belk, et al., 2005; Bray, et al., 2011;
Lichtenstein, Drumwright, & Braig, 2004) and that only a very small segment of consumers consider CSR when purchasing products (Mohr, et al., 2001). The following statements illustrate this conclusion:

*For me, it is important that it is affordable, I would say, and that I am able to make use of it. That is what I primarily take into account: that it is inexpensive, that it is a good value-for-money-ratio (male, 25).*

*In the case of sport equipment, for example, quality is, for me, crucial. I mean, for instance, a running shoe: I look at the functional parts. I think that is important, that it is a good product (male, 41).*

*I try to buy from smaller shops, since they offer better service. A small bike retailer is often more expensive, but it’s worth paying a bit extra for the service offered (male, 37).*

Although a company’s CSR initiatives alone do not trigger a purchasing decision in most cases, there are several determinants that increase the likelihood of taking CSR into consideration when making purchase decisions. Specifically, consumers clearly distinguish between core, central, and peripheral factors. Core factors determine whether CSR is taken into account when deciding about a purchase. If they are not met, CSR will most likely not play a role in a consumer’s buying decisions. These core factors are information and personal concern. Furthermore, the consumer respondents perceive the financial situation of a buyer as a central factor that determines the assessment of CSR as a purchase criterion. Finally, the interviewees also identified peripheral factors that have an impact on the likelihood of considering CSR as a purchase criterion. These are consumers’ perceptions of the credibility of CSR initiatives, the image of the company, as well as the influence of peer groups. Below, the three factors will be discussed in detail.

### 2.4.1. Core Factors

Consumers’ perceive two core factors as decisive for a potential consideration of CSR as a purchase criterion: information and personal concern. They are both prerequisites for considering CSR in the purchasing process.
The most important and complex one is information on a company’s CSR position. Past research also draws attention to the fact that information is a necessity for consumers to consider ethical product features in their consumption decisions (e.g., Bray, et al., 2011; Timothy M. Devinney, Auger, Eckhardt, & Britchnell, 2006). Information consists of two dimensions: level of information and type of information. The former describes the extent of knowledge (e.g., no, little, or extensive knowledge) consumers have about a company’s CSR initiatives. The second dimension focuses on whether the CSR information consumers have is perceived as positive or negative. The following two statements illustrate how the type of information shapes consumers’ perceptions:

*Zotter chocolate is expensive, but also really delicious, and it is a fair trade product. I also know that the company is looking after the employees; and the employees have their own cook, and they can also bring their children and other family members to eat with them, also as relief for the women working there* (female, 22).

*This problematic nature is, of course, well-known, and you heard often about child labor at Nike, Adidas, and Puma and all of these manufacturers of sports equipment. It is a constantly-recurring issue there* (male, 23).

When consumers have no or only little information about a company’s socially-responsible behavior, CSR will unlikely be considered a purchase criterion. Put differently, when equipped only with some vague idea of a company’s CSR practices, consumers will tend to overlook this information and continue with their customary purchasing behavior:

*I can imagine myself doing that [engaging in a boycott] if I got to know it [that companies employ dubious practices], but I just don’t have access to the information. But I am definitely a person that would not go there [to a company employing dubious practices] in case I would learn about something like this* (female, 42).

*It [whether consumers consider companies’ CSR activities] depends on whether you know something about it or not. I think if you are not especially interested in topics like that, consumers do not know anything about it. I mean, when I buy a hair shampoo, I have no clue how the company was producing it. I think it is important to get more information on that* (male, 22).
In contrast to the two previous statements, consumers can also have extensive knowledge of a company’s CSR behavior. This can relate both to positive and to negative corporate behavior. When well resourced with comprehensive CSR information, the respondents believe that it is easier and more likely for them to integrate CSR into the decision-making process:

I prefer buying products from companies that I consider to be OK, for me OK. For example, I would not buy Nike shoes, and I like Adidas much more. Also, I do not think they [Adidas] have been in the media [for bad practices] (female, 43).

I consciously buy Fair Trade products, including flowers, orange juice and coffee, sure this is only a small product range but here I pay attention to it. I choose these products over others because I know that it is a recognized label and I know that they use the money for a good cause, helping [other people] (male, 25).

If consumers do have enough CSR-related information about a specific company, they will evaluate whether the respective behavior can be reconciled with their own personal concern of CSR-related issues. This is a core factor and comprises the attitudes consumers have towards CSR initiatives, such as non-employment of child labor, fair wages, environmentally-friendly practices, fair trade, or organic production, etc. This core factor is very subjective in nature. In contrast to other factors, personal concern cannot be influenced by companies:

For me, it is also important how executives behave towards employees and workers, how they treat them... That plays an important role for me (female, 48).

Wal-Mart and its sub-contractors, for example, severely exploit the environment and pay only very low wages; for me this definitely was a reason for not buying there (male, 25).

In the sample, there are even a few respondents who do not consider child labor or similar practices negatively, because they attach little personal importance to these and would not refrain from buying products associated with such issues:

There is a multitude of people that are not concerned with the environment. They will not feel addressed by this kind of information [the environmental conduct of a
company]. These people are still driving with their 20-year-old cars or with their huge cars that consume 20 liters of petrol. They will not be affected by it (male, 22).

Sure, H&M always was blamed for using child labor, or from time to time you see those labels “Made in Turkey”, or “Made in Bangladesh”, which you do not associate with something positive, but yes, you put up with it because it is cheap; unfortunately this is the way it is (female, 22).

I am aware of the problems, but I think every company makes negative headlines; so, for me this is no reason to stop shopping at H&M (female, 51).

Most of our interviewees stated that they wait to be informed and then assess whether they can reconcile the obtained information with their personal concern.

There should be definitely more information [on CSR initiatives]. This should not be hidden, but rather used for propaganda purposes. I really think this should be done. For me, it would be very important to know that, for instance, a grocery store, if they have a surplus, they do not throw it away, but rather give it to charities (female, 65).

However, in a few cases, this process is reversed: Some respondents have strong negative attitudes concerning certain issues and proactively seek corporate information on these issues:

Nowadays, consumers question certain things. I do not randomly go into [any shops] and say I do not care [about their CSR activities]. Instead, I ask what is behind it [the company], what are they doing [in terms of CSR] (female, 48).

2.4.2. Central Factor

The interviewees stress that the financial situation of a consumer constitutes a central factor in this process. The factor not only describes the consumers’ price perception and willingness to spend money on products from socially-responsible companies, but also the actual monetary resources of a person. With price being a very important criterion in decision-making among interviewees, the financial situation of the consumer is highly relevant when purchasing goods. These findings are in accordance with previous research on
the importance of price (Carrigan & Attalla, 2001) and the dominance of financial rather than ethical values in purchase decisions (Bray, et al., 2011). Thus, sufficient financial resources are a prerequisite for considering a company’s CSR activities as a purchase criterion.

Price is frequently only a justification for not considering products of socially responsible companies. Our respondents assume that products of a socially responsible company are more expensive than alternatives. In some cases, such as fair trade products, this conclusion seems justified. However, there is a multitude of products of socially responsible companies that are not higher priced. Consumers may be willing to opt for the products of a socially responsible company when these are not more expensive than “regular” products. However, they often make wrong price assumptions. From the data, it becomes clear that consumers infer that they will not be able to afford products of a socially responsible company.

*I can imagine that products that take care of certain issues and adhere to all regulations just cause higher production costs and sales costs than other products that do not care, that are just cheap and produced at an ecological minimum (male, 45).*

Finally, sometimes a company’s CSR efforts are actually incorporated into a product’s price, as in the case of fair trade. Consequently, there are consumers who do not have the financial resources to buy these products.

*It is definitely dependent on the money you have at your disposal. If you have a job where you don’t earn a lot and you maybe still have to support a family, it might be possible that you would like to [consider a company’s commitment or CSR efforts], but you just can’t (female, 23).*

Respondents agreed that, in most cases, purchasing products of companies with positive CSR activities is related to the assumed price premium of such products: If the price differs only slightly, they would prefer the product of a socially responsible company over a company with a negative CSR profile:
I would rather pay more for coffee from fair trade than from Tchibo [coffee chain] (...)
I won’t pay 100 euro more, but if it is a question of 20 or 30 cents, then I will pay more
for fair trade than for normal (female, 60).

It depends on the product and if the price is acceptable for me; it has to be within
reason that I say, “OK, I will pay five Euros more for a product because there are
better working conditions.” I do not think it is possible. But that I pay two or three
Euros more, this I would definitely do (female, 25).

In order to consider CSR as a purchase criterion, respondents stress that the two discussed
core factors and the central factor have to be met.

A lot of people do not know it [whether a company behaves socially responsible]. They
might care about these issues, but do not know it. Then, if it [the product from a
socially-responsible company] is more expensive, it depends on the customer base.
There are definitely some customer groups that say they would rather pay 10% more;
[...] First of all, they do not know about it, and then, second, they do not care (male,
22).

I think that products made under socially-responsible practices and terms, they
[people] do not buy them because of their lack of knowledge, their disinterest, and
shortage of money (male, 45).

These prerequisites limit the group of consumers who may take account of CSR initiatives in
their purchase decisions. And, worse still, our interviewees experience the assessment of the
core and central factors as a complex process that demands much more involvement than
other criteria, such as brand familiarity, which is easy for them to determine when standing
in front of the shelf. This complexity already offers a first explanation of the minor
importance of CSR as purchase criterion. Moreover, the process follows a hierarchical
structure, as the central factor will not come into play without the presence of both core
factors. But even when all core and central factors are met, our respondents argue that CSR
does not automatically become relevant in their decision-making.
2.4.3. Peripheral Factors

When all core factors are met and the central factor – price – is perceived acceptable, our interviews revealed that the respondents consider three additional factors before they incorporate a company’s CSR initiatives into their purchasing decisions. These peripheral factors include the image of the company, the credibility of CSR initiatives, and the influence of peer groups. The label “peripheral factors” indicates that these factors, by themselves, are not able to trigger an inclusion of CSR criteria in the decision-making process. However, consumers state that they might further enhance or decrease the probability of considering CSR in purchase decisions.

The image of a company is, according to the respondents, an indication of whether or not it employs socially-responsible practices when conducting business. A positive perception of a company’s image evokes the association that the company behaves socially responsible. Our respondents believe that this, in turn, increases the likelihood to consciously opt for a company’s products and incorporate CSR efforts into their purchasing decisions.

On no product it says, “I am a socially-responsible company” or “I am not.” It’s not marked anywhere, but rather you know the company. Yes, it either has a good image or a less good image, and this is what matters in the end. Eventually, it is an overall picture. If it [the company] treats everyone fair and makes a good product, it will certainly have a good reputation (male, 52).

The credibility of CSR initiatives constitutes another peripheral factor. The respondents agree that credibility is influenced by the fit between a company’s CSR initiatives and its core business. Many consumers only consider a CSR initiative credible if it is aligned with a company’s core business. The respondents conceive that initiatives totally detached from the business a company is operating in appear less credible and are interpreted as a marketing ploy. Furthermore, initiatives are less credible if they involve only a monetary donation.
I think it is not credible if Mr. Hill, with his newspaper, supports a village in Africa. On the other hand, if KTM tries to heal backbone injuries because they sell products which might provoke something like that, then I think it is well received (male, 37).

Besides the fit, the credibility of CSR initiatives strongly depends on the channel of communication.

The more “low-key” the communication is, the better. The more offensive, aggressive, or bold it [CSR initiatives] gets communicated, the more unpleasant I perceive it.

Being listed as a sponsor on the program of a music event is OK, but a huge newspaper ad is quite annoying (female, 43).

Finally, the influence of peer groups, which is closely connected to the image of a company, is the last peripheral factor. A company’s image frequently develops through interactions with colleagues, friends, or family. Consumer respondents stress that peer groups can also directly influence their assessment of CSR as a purchase criterion. Family and friends can either dissuade or encourage consumers to buy from a socially-responsible company. According to the interviewees, this leads consumers to either refrain from buying certain products or to support a specific company.

At one time, I really liked shopping at H&M. But then I got to know, from my circle of friends, that the cheap products are just available because children have to do the work. This really shocked me, and I also know some others who stopped buying there for this reason. I also have a hard time shopping there (female, 42).

2.5. Synopsis

Our research identifies core, central, as well as peripheral factors and their hierarchical relation. For the assessment of CSR as a potential purchasing criterion, it is important to evaluate the presence of core factors and the acceptability of the central factor price. If

1 Name changed to ensure anonymity
consumers do not have any information or do not care about CSR initiatives, they do not consider CSR as a purchase criterion. If they do have relevant information, consumers will next evaluate whether they have the financial resources and are willing to spend money on products from socially-responsible companies. This hierarchical process is reflected in previously cited consumer quotes. Of course, the interpretation of these quotes was also based on interview observations and field notes. In addition this dynamic is also mirrored in the following quotes:

*Somebody who does not even know about it [CSR activities of a company] and/or who is not interested in it, has no attitude towards firms that do not engage in CSR. Such a person will still buy the product because it is cheap and good and he keeps within budget (male, 45).*

*I think people do not care about it [CSR activities] because they do not know about it, they are not interested in it and/or they do not have the money when they compare it because I can image that products that take certain things into account or that adhere to standards that they naturally imply higher production costs and sales costs than products that do not care about this and are manufactured very cheap and under ecologically detrimental circumstances (male, 45).*

Peripheral factors can explain why some consumers are still skeptical about CSR although all core factors are met and the central factor is deemed acceptable. The complexity of the assessment of all core, central, and peripheral factors leads a large number of consumers to ignore CSR as a purchase criterion.

It is important to acknowledge the interrelatedness of these factors. This is particularly evident for peripheral factors, where image, for instance, is often affected by both peer groups and the credibility of CSR initiatives. However, the interrelatedness is also visible across different layers of factors: Personal concern can exert an influence on the acceptability of price, or personal concern can be linked with peer groups. It is therefore important to assess these factors not as separate entities, but as integral elements of the overall process. Eventually, both context and person could have an influence on the purchase intent. It might be possible that acceptability of price becomes a peripheral factor
for wealthy individuals. The following consumers verbatim show the interrelatedness between the factors:

*I often buy gifts at The Body Shop, and from now and then I also buy something for myself when I want to reward myself [...] because I like their philosophy. Nevertheless I do not buy there regularly because currently their products are too expensive for me* (female, 21).

*It [whether a person considers CSR activities] always depends on the social class you are in. Somebody who has no money will not care about it, but if you have a good income and you are concerned about your nutrition for example I do think you will consider it* (male, 23).

Despite these caveats, the process of assessing core, central, and peripheral factors remains the same.

### 2.6. Conclusions and Implications

This paper set out to assess the role of CSR in the purchase decision-making process and to explain the limited role of CSR in these decisions. The main contribution is the investigation of a complex process that explains why CSR is hardly ever of prime importance in consumer decision-making. To this end, our research contributes to a better understanding of the attitude-behavior gap: Consumers report positive attitudes towards buying products from socially-responsible companies, but these positive attitudes are not transferred into actual purchase behavior. Our research explains this discrepancy and identifies a large number of factors that influence the assessment of CSR as a purchase criterion. This illustrates the complexity of the evaluation process. This complexity may hinder even consumers with a positive attitude towards CSR to incorporate CSR into their decision-making process. Moreover, our research discovered that the evaluation process follows a hierarchical structure. While certain factors at the core level are a prerequisite for an inclusion of CSR as purchase criterion, others just exert a moderating effect on this decision. The distinction
between core, central, and peripheral factors offers new insights into the complexity of the assessment and consumers’ involvement in the process.

This research also offers several managerial implications. Managers face two fundamental options: First, they could ignore consumers’ interest in CSR and not integrate CSR initiatives into their marketing activities. In this case, it is recommended to focus on a positive corporate image, as consumers who are interested in CSR deduce CSR associations from an overall corporate image. Second, managers could focus on CSR positioning and CSR in marketing communication. Here, managers have to bear in mind the complex consumer evaluation process required to achieve consumers’ appreciation of CSR efforts. First and foremost, managers have to make CSR information more easily available and point out in which ways a product or the entire company is connected to CSR initiatives. Companies should only communicate those CSR initiatives that are related to the company’s core business – thereby accommodating the peripheral factor of credibility. Moreover, they would be well advised to disseminate their CSR efforts through various channels of communication, taking into account that the credibility of the information is highly dependent on the channels chosen for disseminating the information. Thus, managers have to assess the trade-off between the communication credibility and the audience reached. Second, personal concern is the most difficult core factor to take account of when incorporating this research’s findings into business practice. The most valuable approach, although difficult, would be to segment consumers according to their personal concern and communicate different CSR efforts to different target groups. Companies could, for example, use direct marketing communication with interested target markets. Social media such as Facebook, Twitter, etc. could be employed to initiate tightly targeted CSR campaigns to certain segments. Third, concerning consumers’ price perceptions, managers have to be aware that income will influence a person’s ability to take CSR into account. Where applicable, the focus should be on communicating that the products of a socially-responsible company are not pricier than other products. In case the price is indeed higher, managers need to watch the differences to prices of competing products, as consumers pay a lot of attention to the proportionality of price differences. Pricing is particularly important for managers in high price/high quality niches, as consumers interested in CSR also look for high
quality products. If managers decide to ignore consumers’ potential CSR interest, it is better to offer products in the low-price segment.

As a qualitative study, this research suffers from a limitation inherent in all such studies, namely that the results cannot be generalized. However, the objective of qualitative research is exploration and conceptualization, rather than generalization (McCracken 1988). Thus, future research on the influence of CSR in purchase decisions could employ quantitative methods. More specifically, the identified factors could be cast in a questionnaire, and a large-scale survey could attempt to measure the influence of the factors we identified in different consumption situations. In addition, the relationship between the identified factors, i.e. the interrelatedness of the factors and feedback-loops, would offer another promising possibility for further research. Another interesting avenue for future investigation would be a cross-cultural study to assess whether the identified factors differ in various cultural settings. Furthermore, as level of information is acknowledged to be a crucial point for evaluating corporate CSR initiatives, further research could focus on potential communication strategies and their impact on the target audience. Finally, the relationship between CSR initiatives and price perceptions as well as the role of consumers’ personal value system offer promising avenues for further research.

Abstract

In accordance with societal norms and values, consumers readily indicate their positive attitudes towards sustainability. However, they hardly take sustainability into account when engaging in exchange relationships with companies. To shed light on this paradox, this paper investigates whether neutralization techniques can explain the discrepancy between societal norms and actual behavior. A multi-method qualitative research design provides rich insights into consumers’ underlying cognitive processes and how they make sense of their attitude-behavior divergences. The findings help to advance the Ways Model of account-taking to a Cycle Model, illustrating how neutralization strategies are used to legitimize inconsistencies between norm-conforming attitudes and actual behavior. Furthermore, the paper discusses how the repetitive reinforcement of neutralizing patterns and feedback loops between individuals and society could lead to an increase in anomic consumer behavior.
3.1. Introduction

Sustainability and sustainable products (products with positive social and/or environmental attributes (Luchs et al. 2010)) have received considerable attention and are further increasing in importance (Chabowski, Mena, and Gonzalez-Padron 2011). This is also true for the “twin ideas” (Hildebrand, Sen, and Bhattacharya 2011, 1353) of corporate social responsibility (CSR) and business ethics. Consumers’ positive mindset concerning these principles is no longer the subject of debate. 88% of consumers think that companies should protect the environment and take care of social issues (Cone 2010). Also academic research shows that consumers consistently indicate positive attitudes towards sustainability and state their willingness to opt for sustainable brand attributes rather than traditional ones (Kotler 2011; Luchs et al. 2010; Taneja, Taneja, and Gupta 2011). However, the strength of these positive attitudes is not mirrored in their actual behavior and market shares of sustainable products do not correspond to consumers’ stated intentions. This unresolved paradox puzzles both academia and industry practice.

Several authors have tried to pin down factors impeding an attitude-consistent purchasing behavior (Bray, Johns, and Kilburn 2011; Öberseder, Schlegelmilch, and Gruber 2011; for a detailed analysis of intention-behavior relations please also refer to Sheeran, 2002). However, rather than focusing on specific factors, this paper aims at examining the underlying cognitive processes precipitating a contradictory behavior and providing a comprehensive conceptualization of it. Specifically, a Cycle Model is developed to demonstrate that positive attitudes and contradicting behavior are not incompatible but part of the same sophisticated consumer decision process. This paper offers several contributions: First, it presents an amendment and refinement of neutralization techniques in the context of sustainable consumer behavior. Second, we provide a discussion of whether these neutralization strategies are used before or after the decision-making and which importance and acceptability consumers ascribe to them. Given the malleable nature of norms referring to sustainable consumption, the respective impact of neutralization techniques varies among consumers. We therefore develop a classification of different
consumer types which differ in the importance they attach to sustainability issues and their intention to incorporate such issues in their decision making. Next, we use our Cycle Model to demonstrate the coherent nature of consumers’ attitude-behavior reconcilement, which can be reinforced by neutralizing strategies. Finally, our findings are interpreted in the context of social learning theory, which illustrates how such neutralizations may be further reinforced by imitation. In turn, imitation could lead to various negative outcomes, such as rising consumer anomie.

3.2. Background

Research has identified “that concern for the environment and society has mushroomed” (Roberts 1996, 80). This enhanced sensitivity for sustainability is apparent both among companies and consumers. Sustainable (i.e. environmentally and socially responsible (Prothero et al., 2011)) consumption can potentially refer to a broad spectrum of behaviors from disposition to anti consumption. Among these we deemed consumers’ purchasing patterns of sustainable products to be the most important behavior and thereby subscribe to the opinion of several other researchers (Jackson, 2006; Prothero, et al., 2011; UNEP, 2003, 2005b). After all, the UN identified our current consumption patterns (referring to the purchase of household goods as well as consumers’ transport choices) as the major threat to Earth’s environmental capacity (UNEP, 2005b). Furthermore, technological advances and companies’ motivation to innovate are contingent on the consumption and choice patterns of individuals. When looking at the relatively small market shares of sustainable products, it is obvious that consumers’ positive attitudes are an insufficient predictor of actual behavior. Consumer decision-making with respect to socially responsible behavior has been identified as a highly complex, multidimensional process involving intellectual, moral and pragmatic components. Accordingly, intentions and behavior are not connected in a simplistic and straightforward way but involve a translation process susceptible to various influences, errors and distractions (McGregor 2008). The significant discrepancy between consumers’
intentions to buy products with sustainable attributes and their actual purchasing decisions is a preeminent phenomenon encountered in sustainability research. This “attitude-behavior gap” has been investigated in several areas, always depicting that actual purchases lag behind attitudinal statements (Chatzidakis, Hibbert, and Smith 2007; Roberts 1996).

Individuals demonstrate a pervasive tendency to portray themselves in a favorable way and when they engage in norm-contradicting behavior, they experience the force of social sanction (Fritsche 2005). Social norms reflect widely shared beliefs among individuals of a group and are perpetuated by group members’ approval or disapproval, and therefore differ from both moral, legal and personal norms (for a detailed discussion please refer to Elster 1989). They arise “when actions cause positive or negative side-effects for other people” (Fehr and Fischbacher 2004, 185). Corresponding to these notions, we adjudicate a norm-like character to sustainable consumption behavior, as it is of paramount importance and has profound consequences on the human and societal condition (McGregor 2008). Furthermore, it is in line with Elster’s (1989, p.99) definition of social norms as entailing propositions such as “Do X if it would be good if everyone did X”. Accordingly, neutralization strategies are a valuable and promising means to investigate norm-violations in the context of sustainable consumer behavior. This normative character, however, is a rather flexible one and dependent on the consumer context (Chatzidakis et al., 2007). Therefore, in specific situations and referring to specific consumers, other factors such as personal norms and values might exert a stronger relative influence on intentions.

Defense mechanisms date back to early research in ego psychology (Fenichel 1945), whereas the more specific concept of neutralization techniques origins in research on juvenile delinquency. Sykes and Matza (1957) found out that individuals use five major strategies to neutralize both internal and external demands for conformity to societal norms and laws:
(1) **Denial of Responsibility (DR):** DR reflects individuals’ beliefs that they are not personally responsible for any violation of societal norms because of external factors they cannot influence. Individuals feel that due to circumstances outside their control, they are predisposed to act in a specific way (McGregor 2008).

(2) **Appeal to Higher Loyalties (AL):** This strategy implies that individuals aim to legitimize their behavior by arguing that they are trying to realize an ideal of higher order. Individuals belong to a smaller social group and are willing to sacrifice societal demands for the benefit of this group.

(3) **Condemning the Condemners (CC):** CC is used by individuals to deflect their own misconduct by arguing that those who condemn it engage in similar activities. By attacking someone else, individuals shift the focus of attention from their own norm-violating behavior, which is consequently more easily repressed.

(4) **Denial of Injury (DI):** DI pertains to the argument that the personal wrongdoing is tolerable because nobody was injured. The focal point of attention is the harm involved in the norm-violating behavior. Individuals do not deny their behavior but take it upon themselves to evaluate its wrongfulness, which strongly depends on whether someone got injured in the act.

(5) **Denial of Victim (DV):** When applying DV, persons acting in a delinquent way do not neglect that injuries happened, but rather argue for their rightfulness considering the circumstances. The victim is the one who has done something wrong and the injury is the deserved punishment or retaliation. Accounting is further facilitated when the potential victim cannot stimulate the conscience of the individual (McGregor 2008).

The original five techniques of neutralization identified by Sykes and Matza (1957) have later been applied to areas of criminology and broader societal issues (Harris and Dumas 2009). A further set of strategies, specifically refined and adapted to the context of unethical retail disposition, has been developed by Rosenbaum et al. (2011). Maruna and Copes (2005) also provide a very comprehensive portrayal of various neutralization techniques in a broad range of areas. An overview of previously identified neutralization techniques is provided in Table 3.
<table>
<thead>
<tr>
<th>#</th>
<th>TECHNIQUE</th>
<th>DESCRIPTION</th>
<th>CONTEXT</th>
<th>AUTHOR &amp; YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Defense of Necessity</td>
<td>Behavior is necessary; individuals would act differently if they could</td>
<td>Criminology</td>
<td>(Minor 1981)</td>
</tr>
<tr>
<td>7</td>
<td>Claim of the Metaphor of the Ledger</td>
<td>Good actions counterbalance unacceptable behavior; in total the individual is on the good side</td>
<td>Professional Crime</td>
<td>(Klockars 1976)</td>
</tr>
<tr>
<td>8</td>
<td>Denial of the Necessity of the Law</td>
<td>Some laws are unfair and infringe individual rights</td>
<td>White-collar crime</td>
<td>(Coleman 2005)</td>
</tr>
<tr>
<td>9</td>
<td>Claim of Entitlement</td>
<td>Individuals have the right to engage in any desired behavior and gain the benefits of it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Claim of Relative Acceptability</td>
<td>Other’s behaviors are even worse than one’s own</td>
<td>Deviant behavior of students</td>
<td>(Henry and Eaton 1999)</td>
</tr>
<tr>
<td>11</td>
<td>Claim of Individuality</td>
<td>Individual does not care what others think of his/her person or actions</td>
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<tr>
<td>12</td>
<td>Justification by Comparison</td>
<td>The behavior of the individual is still preferable to even worse actions s/he could engage in</td>
<td>Shoplifting</td>
<td>(Cromwell and Thurman 2003)</td>
</tr>
<tr>
<td>13</td>
<td>Justification of Postponement</td>
<td>Individuals suspend the assessment of morally questionable behavior to a later time</td>
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<td>14</td>
<td>One-Time Usage</td>
<td>The usage of a product for a single event is acceptable; they never intended to permanently own it</td>
<td>Consumer fraud via product returns</td>
<td>(Rosenbaum et al. 2011)</td>
</tr>
<tr>
<td>15</td>
<td>First-Time, Only-Time Crime</td>
<td>The unethical behavior is an exception, a singular immoral instance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Outsmart the System</td>
<td>The consumer is proud of circumventing retailers and their policies</td>
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</tbody>
</table>

Table 3: Additional Neutralization Techniques Extending Sykes and Matza
There are a few studies that have helped to advance knowledge concerning neutralization strategies in different marketing-related situations (Bock & Kenhove 2011; Chatzidakis et al. 2007; Harris & Dumas 2009; Strutton et al. 1997). What distinguishes present research from previously conducted studies is that the majority of consumers consider sustainability to be an important and affirmative issue. Accordingly, societal responses are likely to vary compared to behaviors which are apt to elicit negative attitudes and valences. Furthermore, what has been neglected so far is an analysis of the timing of cognitive rationalization processes. Research addressing the question of whether justifications are used rather pre or post- behavior has specifically been called for by several authors (Cromwell & Thurman 2003; Maruna & Copes 2005).

3.3. Method

Sustainability and consumer behavior is a very broad and complex field, which implies that qualitative research is an appropriate approach to knowledge generation (Zaltman, LeMasters & Heffring 1982). Furthermore, qualitative methods offer the advantage of high validity and depth, generating meaningful insights into the acceptability and timing of neutralization techniques. As individuals apply cognitive schemes to their decision-making processes, they construct a system of stories to guide and explain their actions. Therefore, the study is of an exploratory nature, aiming to acquire an in-depth understanding of consumers’ internalized processing structures. More precisely, we conduct a multi-method, qualitative study with two different approaches – involving both focus groups and in-depth interviews employing indirect questioning techniques – to tap into consumers’ perceptions and usage of neutralizing strategies.

Social interaction is of importance in this context, as an individual’s self-image is heavily influenced by other people’s perceptions. Accordingly, we first conducted four focus groups with 6-8 participants (14 men and 15 women, aged between 18 and 70 years) to better tap into socially desirable attitudes held by participants. In a second step, self-report
measures were abandoned and 23 in-depth interviews (11 men and 12 women, aged between 18 and 85 years) carried out, using an indirect projective questioning approach. Interviewees were asked to take a third person view to evaluate and reflect an average consumer’s consumption behavior. As respondents did not have to indicate their own preferences, they were less prone to present themselves in a positive light. Thereby we aimed to retrieve more truthful and realistic evaluations of consumers’ usage of justifications and hope to have circumvented a potential social desirability bias (Fisher 1993).

Purposeful sampling was employed to select interviewees who could deliberately inform us about this specific research problem. Accordingly, interviewees were intentionally chosen to maximize structural variation (Glaser & Strauss, 1967) and recruited via a mixture of convenience and snowball sampling. Our selection criteria are not based on statistical data, but focus primarily on qualitative and content-wise criteria derived from the analysis of the research field. Rather than representativeness, we envisioned a diverse attitudinal sample. Thus, interviewees were diverse in terms of demographics but more importantly in their shopping behavior and concern about sustainability issues. Furthermore, we (and other informants) provided some a priori assessment of their proneness to social pressure and influences, which was taken into account during the final interviewee selection. The data collection phase was concluded at the point of theoretical saturation (Glaser and Strauss 1967) and only repetitively emerging patterns.

Interviews were conducted and partly transcribed by the researchers in order to gain more contextual knowledge and insights into the topic and partly by externals in order to have a certain sequential distance to the text and its analysis. The analysis of the qualitative data followed the basic steps of coding, combination of the codes into broader categories and themes, and interpreting the results. The analysis developed gradually during the data collection process and findings of the first interviews influenced the discussion guidelines for subsequent ones. After all the data had been collected, the final analysis involved an iterative process of rereading and coding, to identify underlying patterns (Glaser and Strauss 1967). As individuals apply cognitive schemes to their decision-making processes, they construct a system of stories to guide their actions and explain why they engage in a certain
behavior. The data obtained was categorized by looking at each sentence and coding it into both predefined and emerging categories. Later on, these categories were abstracted to retrieve higher-order categorizations, which were consequently compared to each other as well as to existing neutralization theories (Spiggle 1994). For the sake of clarity and readability, we do not present findings in the complex and lengthy rendition originating from the iterative interpretation.

3.4. Findings

Sustainability is a complex and multi-faceted concept which is hard to grasp for consumers. Our interviewees demonstrated a very diverse understanding of sustainability: Whereas for some consumer it is a definite question of what kind of food they consume (whether they are vegetarian, buy only local or organic products etc.), others refer to much broader (such as their choice of transport) or more encompassing issues (such as what happens with chosen products after consumption) when talking about sustainable consumption and decisions. We further believe that the elusive nature of the concept “sustainability” contributes to the employment of neutralization techniques by consumers, as norms referring to several forms of sustainable behavior are not yet clearly developed or pronounced.

We start our discussion by presenting a short characterization of different consumer groups that emerged from the qualitative data as they differ in their respective neutralization patterns.

Enthusiasts: A few respondents are highly supportive of sustainability and thoroughly convinced about their moral obligations:

I personally rather buy products of companies that behave in a socially responsible way. I think that it feels better, at least on a subliminal level, to buy products from responsibly acting companies, to buy products that have been produced and are sold under fair circumstances (male, 23).
Enthusiasts might be prone to use neutralization techniques in situations where they diverge from their inner social compass. Furthermore, they are more likely to use several techniques to strengthen and reinforce the justifiability of their behavior. However, *Enthusiasts* are not assumed to engage in long-term stable norm-violating behaviors.

**Fickle Consumers:** A large part of interviewees think that sustainability is a good thing and worthy of support. However, their moral conscience is not as mature and concrete as among enthusiasts. Accordingly, *Fickle Consumers* are not specifically tied to sustainable products and buy conventional or even harmful ones as well. However, due to the social desirability of behavior in line with societal principles, stated intentions are approximating the strongly positive attitudes of enthusiasts:

> I believe that consumers think positively about sustainability issues; it also definitely improves the company’s image, but only when the company has been engaged in such practices for a longer time and is already known for its CSR policy. I really think that it catches on with the customers, but only if the products are not too expensive (female, 39).

Only within the interpretation of interviewees, the differences to the *Enthusiasts* became apparent. *Fickle Consumers* drift back and forth between behavior that is norm-compliant and behavior that is norm-violating. As a result, this group is anticipated to constitute the major segment of consumers employing neutralization strategies, as they will make use of them for all the situations in which their consumption decisions contradict societal values.

**Detractors:** A few respondents openly stated their non-interest in sustainability issues. While they do appreciate the underlying idea of such practices, they are neither convinced by them nor willing to incorporate them into their purchasing decisions:

> Larger corporations just see CSR as an annoying duty, because they just need to have it in order to influence consumers and customers with such initiatives. However, I think the social fabric of companies is not very distinctive. I think that sustainability today is rather a means for MNEs to increase their revenues, this is what I think really happens (male, 45).
Detractors do not believe in the moral obligation they have as consumers and do not feel pressured by societal values. Accordingly, they will refrain from using justifications for their norm-contradicting behavior.

This research aims to reveal consumers’ usage of neutralization techniques when evaluating sustainability attributes in purchase situations. In Table 4, all techniques identified in the qualitative data are presented and discussed within this particular context.
<table>
<thead>
<tr>
<th>Technique of Neutralization</th>
<th>Interpretation</th>
<th>Consumer Verbatims</th>
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<tbody>
<tr>
<td>1 Denial of Responsibility</td>
<td>Consumers primarily justify their decisions by arguing that sustainability is something they should not be held accountable for. One person alone cannot trigger any change and the outcome does not vindicate the input (e.g. price premium).</td>
<td>I don’t think I would consider sustainability when shopping. It’s not OK what most companies do, but I haven’t asked them to do it. Whether I care or not they would do it anyway (male, 35). I think this is a paramount reason for the majority of consumers: It is too far away, too distant and not my business. I cannot change anything; it is not my fault so I don’t need to have a bad conscience (male, 22).</td>
</tr>
<tr>
<td>2 Appeal to higher loyalties</td>
<td>Individuals face a trade-off between values of the society at large and values of a smaller social group they belong to. Justifications often refer to domestic circumstances influencing the consumer’s decision-making.</td>
<td>She doesn’t have enough money but still wants to cater for everything her children want. Also she doesn’t want the children to notice that they cannot have a lot. She buys cheaper stuff so her children have something and will not be ragged at school (male, 48). I mean a mother with three children is probably not working and accordingly has to be even more economical, with three children. You have to consider such things when shopping and assess whether it’s financially possible or not. That is the responsibility of a housewife (female, 85).</td>
</tr>
<tr>
<td>3 Condemning the Condemners</td>
<td>Consumers shift the focus from themselves to the producing companies. They assume that even if they did incorporate sustainability-related factors into their purchasing decisions, companies would still engage in some socially irresponsible practices. Furthermore, individuals blame other consumers to mitigate any potential positive effects of their own behavior.</td>
<td>Every company pollutes something, harms the environment or so. You can’t use green electricity either, because building a hydropower station also affects the environment. And if we don’t buy the products, companies will try to produce cheaper products by exploiting more ... and what then? All companies are doing it... (male, 24). Even if a company really behaves irresponsibly, it’s pointless to be the only person not going there. Then I pay a lot more somewhere else and other people continue to shop for cheap things. Then it doesn’t make a difference (female, 28).</td>
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<tr>
<td>4 Denial of Injury</td>
<td>This technique helps rationalize unethical behavior by arguing that nobody was harmed. In the present context no immediate injury can be caused to a person but other parties can be harmed in a transferred and indirect sense.</td>
<td>It’s much better for children to work for a minimum wage than to do nothing and die. Presumably, they are happy about every cent they earn. Actually you are just helping them, doing good by buying their products (female, 24).</td>
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<tr>
<td><strong>Table 4: Neutralization Techniques in the Context of Sustainable Consumer Behavior</strong></td>
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<tr>
<td>6</td>
<td>Defense of the Necessity</td>
<td>Individuals argue that due to external factors, they do not have the possibility to properly execute the desirable behavior. Consumers refer to globalization and the consequent interconnectedness and complexity of products and supply chains as reasons for not being able to consider sustainable attributes.</td>
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<td></td>
<td></td>
<td>Concerning boycotting Nestlé [...] nowadays it’s not possible to do that anymore, I wouldn’t do this because so many products have a name that doesn’t reveal the company behind it, it’s not possible (male, 26).</td>
</tr>
<tr>
<td>7</td>
<td>Claim of the Metaphor of the Ledger</td>
<td>Consumers believe that it is reasonable to engage in a certain behavior, given that they already contributed their share. The good things done previously counterbalance moral lapses and render them acceptable.</td>
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<td></td>
<td></td>
<td>I assume that the average consumer, in such a situation, would list random examples of how he or she has already contributed to saving the environment. They say that they have already done something so they don’t have to pay in this specific situation (female, 49).</td>
</tr>
<tr>
<td>9</td>
<td>Claim of Entitlement</td>
<td>This technique is used by individuals who think that they deserve the additional benefits accruing from a specific purchase, no matter what consequences it entails for others or the environment.</td>
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<tr>
<td></td>
<td></td>
<td>I think if a company offers a good product that is extremely cheap then consumers would buy it anyway, even if the company is engaging in dubious practices and not working in a sustainable way. It is just the best product and I think the personal advantage is of greater importance (...) One’s own benefit is greater and more important than the benefit you see if workers in Asia are doing better (male, 25).</td>
</tr>
<tr>
<td>10</td>
<td>Claim of Relative Acceptability</td>
<td>Individuals refer to others but rather than questioning the legitimacy of the condemning person, consumers draw attention to others engaging in even less acceptable behaviors.</td>
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<td></td>
<td></td>
<td>I wouldn’t get a bad conscience if I did it like this. Knowing that others who, in my eyes, should really have a bad conscience are just doing whatever they feel like (female, 85).</td>
</tr>
<tr>
<td>11</td>
<td>Claim of Individuality</td>
<td>The consumer is not compassionate about others’ problems, relating to both the environment and society in general. Instead, the individual justifies the behavior by focusing on his or her own person or problems.</td>
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<td></td>
<td></td>
<td>I am a more important person and I don’t care about other people, that is why I don’t really mind this product being made by a poorer person and I am interested in my own advantage (male, 32).</td>
</tr>
<tr>
<td>12</td>
<td>Justification by Comparison</td>
<td>This strategy also revolves around the reference to potentially worse behavior. However, it is not about the actions of others, but reflects the comparison of one’s own behavior to even worse conducts.</td>
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<td>The product in front of me is exactly as bad as the others. It is attached to the same unethical production. And if I stand in front of the shelf and there are five products and all five products are equally bad I can only choose the lesser of two evils (male, 29).</td>
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Justification of Postponement and One-time Usage are not applicable in the context of sustainable consumer behavior, though consumers use a similar referentialization (i.e. time concepts). The remaining techniques of neutralization could not be identified within the interpretation of interviews.

A central tenet revolves around the question what these strategies are intended to do. We suggest that the raison d’être is constituted by the social desirability and normative nature of sustainable consumption behavior and consumers’ desire to act accordingly. Neutralization techniques are intended to transform norm-contradicting into norm-conforming behavior.

In the context of sustainable consumer behavior, it appears as if these justifications are also considered valid by other members of society, because the legitimized behavior is neither illegal nor deviant but only contradicts societal values. Consumers were able to relate to the justifications used when assessing the norm-violating behavior:

*I can totally understand that a woman, who is maybe a single mother as well, cannot take such things into account. I can comprehend that and would not condemn her. When a woman has children and the children are hungry, she cannot gauge such things, she has to take whatever she can afford* (female, 52).

The ability to comprehend and accept actual behavior is crucial in solving the dilemma of social acceptability and techniques of neutralization and provides a link between consumers’ attitudes and their contradicting behavior. All three identified consumer groups do accept the proposed justifications as legitimate excuses. However, only fickle consumers and enthusiasts also employ such neutralizations, whereas detractors are simply uninterested in incorporating sustainability issues in their consumption behavior and do not feel a need for any justification.

In order to provide a comprehensive portrayal of present findings, they are aligned into the Ways Model, an integrative meta-taxonomy of accounting concepts (Fritsche 2005). By accounting for the specifics of the consumer behavior context, we transform the Ways Model into a Cycle Model. It thereby incorporates the connection between societal values
and contradictory behavior and the reinforcement of norm-violating behavior via neutralizing strategies. The Cycle Model is unique in its ability to illustrate the attitude-behavior alignment and stresses both potential barriers as well as used referentializations. Just as the Ways Model is better suited to the “traditional” notion of an attitude-behavior gap, the Cycle Model portrays the dynamic process of attitude-behavior alignment. It incorporates our in-depth findings and exemplifies how attitudes and behavior can be linked through neutralizations, being influenced by the socio-cultural environment in which consumers live and act. Figure 1 depicts how neutralizing patterns can be further reinforced within society and offers guidance on how and when companies can intervene.
The Cycle Model offers an intriguing way of conceptualizing the attitude-behavior gap and provides some insights into the possible chronological sequencing of neutralization strategies. As the cycle model presupposes the use of neutralization techniques, it is not applicable to detractors—after all they do not manifest attitude-behavior inconsistencies.

As previously suggested in the context of juvenile delinquency, in the present context justifications also appear to be used as a priori rather than posteriori rationalizations, regardless of the respective reference concept (i.e. a norm, behavior, time or other persons):

*I mean it is possible that a person thinks of it even before that, before actually going into a specific shop, thinking what he heard about them, whether they exploit people. For me, the decision is made at the moment I put the product in the basket, when I really buy it. That is when I think about it. It is the specific moment of buying the product, I look at it, check the price, think about it, reflect upon it and then I take it. And I do not give any thoughts to it afterwards. As soon as I bought it and it is in my fridge the issue is over (female, 28).*

This specific ordering demonstrates the sequence of sense-making as employed by consumers in their narratives of decision-making processes. As it is grounded in the interpretation of the data it is contingent on our subjective understanding\(^4\). Nevertheless we believe it offers an important initial contribution to answering the disconcerting question of sequential ordering and offers guidance for future research.

Furthermore, the Cycle Model exemplifies the usage of multiple techniques, as being suggested by previous research on neutralization (e.g. Chatzidakis et al., 2007). Rather than using a single strategy, the interviewees justified their behavior with multiple techniques and used them as additional reinforcement for the permissibility of individuals’ behavior:

*Child labor issues start with the fact that you can whitewash it by saying that they are too far away. They have to work anyway regardless whether they*

\(^4\) Some researchers might question whether such judgments can be made based on qualitative data. Nevertheless, the qualitative findings provide interesting pointers for future research.
work for this company or any other one, it does not make a difference. And
then of course you get to the point where you think of your own family. That
again changes all potential considerations (male, 32).

Further patterns emerging from the data relate to a previously theorized distinction
between different traits of neutralizing ascriptions (Maruna and Copes 2005). Based on the
interpretation of our qualitative data, we have identified two broad neutralizing patterns. On
the one hand, consumers use ad hoc justifications in situations of attitude-inconsistent
behavior, primarily in order to reduce their own perceived dissonance. On the other hand,
some consumers employ rather antagonistic referentializations to others, who engage in a
behavior that consequently serves as an excuse for even more consumers. Such patterns are
likely to entail a higher level of stability and long-term influence on consumer behavior, as
they will be further reinforced within society:

There are several circumstances where this “everybody is doing it” excuse is
totally inappropriate. I don’t consider this kind of excuse to be right but it is
one of the easiest and especially in such a consumption context, yes I would
accept it. The mass is doing it and the mass is making the perfect excuse for
them. The less people would do it, the less effective this excuse would be. It is
getting even more acceptable because there are more people to hide behind.
[...] Somebody buying an unsustainable product for the first time will only be
confronted afterwards with the inherently problematic nature of this. Then
you have already bought it once and you will go into the same shop again.
That is basically a repeat offender. And then the excusing is a lot easier
because I am actually a reoffender. I have always had it in the past and now I
just continue because I am already used to it (male, 29).

These findings are also interpretable in line with fundamental premises of social learning
theory. By putting our investigation in the context of this theory, we aim at demonstrating
how important the embodiment of relations and connections between individuals is when
understanding consumption patterns (Dolan, 2002). After all, people do not consume in a
vacuum but both shape and are shaped by their socio-cultural environment which encompasses other human beings as well as explicit or implicit norms. Social learning theory is therefore highly relevant for our research findings and vice versa.

The basic mechanism in social learning theory is an operant, instrumental conditioning process formed by consequences which follow one’s behavior or the imitation of others’ behaviors. Additionally, people learn evaluative definitions by interacting with others, such as whether a specific behavior is good or bad. The more a behavior is defined as good or justified, the more likely a person will engage in it (Akers et al. 1979). As consumers’ attitude-inconsistent behavior, through the use of neutralizing strategies, becomes socially acceptable, consumers do not have to face any negative sanctions and can maintain this behavior. Or more specifically, as Sykes and Matza put it (1957, 667): “It is by learning these techniques that the juvenile becomes delinquent”. Thus, justifications are implicated in the causality of consequent norm-violating behavior (Maruna and Copes 2005). By employing techniques of neutralization, the norm-violating behavior becomes acceptable and consumers are not facing any societal sanction.

A potential negative outcome of such a “learned” and reinforced pattern is the stimulation of imbalance between self- and societal interests and therefore microanomic tendencies. Microanomie describes a cognitive state in which “an individual’s value orientation is skewed toward self, […] unregulated by social interests and therefore inclined to act against them” (Konty 2005, 108). While our data does not provide definite evidence of such a development, we believe it is a promising and interesting avenue for further research.

3.5. Conclusion

This research investigates why consumers’ positive attitudes towards sustainability do not translate into corresponding behavior, and why consumers deliberately engage in contradictory behavior. Our findings show that consumers apply techniques of neutralization when engaging in exchange relationships with companies. The use of neutralization techniques varies according to consumers’ general attitude towards sustainability, as
proposed by Chatzidakis et al. (2007) and as illustrated in the presented consumer categorization. This research is able to provide an in-depth insight and understanding of consumers’ sense-making processes in purchasing situations involving sustainability attributes, which has been called for in prior research on consumers’ response to sustainability (e.g. Belk et al., 2005). Various neutralization techniques strategies are assessed, refined and consequently analyzed concerning their potential to explain attitude-inconsistent behavior. More specifically, our data shows that consumers can “successfully” excuse why they do not consider sustainability in purchase decisions. Successfully relates to the fact that society considers the Justifications used as valid excuses. Therefore, techniques of neutralization provide an intriguing explanation for the discrepancy between reported attitudes and actual behavior. Furthermore, this study both aligns different neutralization strategies with each other and advances the Ways Model (Fritsche 2005) to a Cycle Model, thereby taking reinforcement and feedback loops into account. Our model portrays rich information on consumers’ motives and excuses for engaging in attitude-inconsistent behaviors and their connection back to societal norms. It presents an important contribution as it advances the idea of attitude-behavior inconsistencies as a dynamic process, influenced by the social context, rather than a static “gap”. This conceptualization offers valuable insights for practice and public policy and provides answers to a misalignment which genuinely and daily affects consumers, managers and other institutions.

Last but not least, by linking our findings to social learning theory, we provide a discussion of how unsustainable consumption practices could grow further within our society by means of acceptable justification. Our data shows that consumers do learn from and imitate their fellow human beings – not only in terms of their behaviors, but especially in terms of neutralizing patterns.

As with any research study there are limitations. First of all, there is restricted generalizability due to the qualitative research design. Even though the multi-method approach and its usage for theory generation and refinement counterbalance some of these deficiencies, the data does not allow making propositions for whole populations. Furthermore, an isolated investigation of neutralization techniques has only limited validity in explaining consumers’ cognitive processes. It is important to assess these strategies in the
light of other aspects related to an individual’s life context which also influence the subsequent consumer behavior. Finally, there are some aspects related to neutralizing strategies which remain open, such as whether neutralization techniques may once have been used as posteriori rationalizations for justifying wrongdoing, as suggested by Hirschi (1969). A longitudinal study might provide further insights into the emergence and antecedents of neutralization modes and help to tap into the potential occurrence of anomic tendencies. Since the norm-like character of sustainable consumption is not yet very pronounced, neutralizing patterns and especially societal responses may further change with increasing public awareness. A replication of this study at a later point in time might provide interesting insights into this evolution.

Finally, we hope that the process-orientation of our Cycle Model stimulates and encourages researcher to test this alignment quantitatively.
4. Inferential Evaluations of Sustainability Attributes: How Consumers Imply Product Information

Abstract

Consumers are often confronted with incomplete product information. In such instances, they can eliminate the product from further consideration due to higher associated uncertainty or ask for more information. Alternatively, they can apply subjective theories about covariations to infer the value of missing attributes. This paper investigates the latter option in the context of sustainability and provides an in-depth exploration of consumers’ inference formations. Drawing from rich qualitative data, it offers a conceptualization of the underlying relationships consumers use to infer product sustainability based on other product attributes. The study further assesses whether these findings can be captured in a quantifiable way. To this end, inferred sustainability is conceptualized as a formative second-order construct, thereby depicting the influence of inference-triggering product attributes.
4.1. Introduction

“Every time someone makes a decision about whether (or not) to purchase a product or service there is the potential for that decision to contribute to a more or less sustainable pattern of consumption. Each purchase has ethical, resource, waste, and community implications” (McDonald et al., 2006, p.516). However, consumers are often confronted with incomplete information concerning these product aspects. In such cases, consumers may infer beyond given properties to assess the value of unobservable attributes (Kardes, Posavac, & Cronley, 2004). These inferences are subjective evaluations of attributes on which consumers do not have any explicit information and are based on other available product attributes. In an era of increasing public attention towards sustainability and sustainable consumption, it is likely that these concepts are also mirrored in consumers’ inference formation.

Consider a market interaction in which sellers have perfect knowledge about the sustainability of their products – whether they were being produced under fair working conditions, minimal use of resources, or involve only organic ingredients. Consumers, on the other hand, are not fully informed about these aspects but may want to consider them, for example due to the societal desirability of acting in a sustainable and responsible way. In such situations, rather than specifically asking for more information on a product’s sustainability (Ehrich & Irwin, 2005), consumers may apply cognitive schemata to infer the missing sustainability attribute. The process of inference formation about sustainability attributes based on existing attribute information is the focus of this paper.

The aim is to examine how sustainability attributes interact with other product attributes, and how consumers assess the nature of these relationships and use them to draw inferences about a product’s sustainability. Previous literature has addressed the importance of consumer inferences in the formation of a company’s overall ethical perception and image (Brunk, 2010) but inter-attribute inferences in the context of sustainability have not yet been investigated. However, a sound knowledge of inter-attribute
inferences is imperative for companies in order to understand how their products are evaluated and on which attributes they should position them.

4.2. Background

Sustainability is an important topic both for academia (Kotler, 2011) and industry practice (Cone, 2011) both in industrialized and emerging countries (Chan, 2001; Thogersen, Jorgensen, & Sandager, 2012). Concern regarding responsible and sustainable corporate practices has exponentially grown among consumers (Freestone & McGoldrick, 2008), who regularly take these issues into account when evaluating companies and their products (Cone, 2010; Taneja, Taneja, & Gupta, 2011). Furthermore, consumers increasingly opt for socially and environmentally responsible brand attributes rather than focusing on traditional functional or emotional ones (Kotler, 2011). However, this presupposes that these attributes are discernible for consumers. Many companies have only recently started to explicitly integrate such attributes into their products’ positioning while others do not include them at all. This raises the question how consumers evaluate a product’s sustainability without specific information. Ehrich and Irwin (2005) found that rather than asking for more information, most consumers choose the willful ignorance of such attributes. In contrast to the abdication of information on sustainability attributes, consumers might also infer their value based on other product attributes.

Consumers’ inference formation is an important component to understanding their decision making process when being confronted with incomplete product information (Lynch Jr & Srull, 1982). In order to minimize the risk and uncertainty associated with product choices based on incomplete attribute information, consumers draw inferences about these missing attributes. Broadly, inference formation refers to the construction of meaning beyond explicitly stated information. It describes the application of existing subjective knowledge about causalities to generate if-then linkages (Kardes, et al., 2004).
The objective is to make a prediction about an unobservable attribute (Broniarczyk & Alba, 1994b) and the mechanism consumers employ is correlating the missing attribute with an observable one. Put differently, consumers have formed underlying theories concerning covariations and apply them when evaluating products (Baumgartner, 1995). The specific inference process that occurs in a certain situation depends on several factors, such as whether cues that trigger the process are situationally available or memory-based (Lynch Jr & Srull, 1982). Memory-based inferences are easier to retrieve compared to identifying and judging stimulus-based information (Kardes, et al., 2004).

Another differentiation refers to the source of inference formations. Correlation-based inferences can be either formed through inferences from an existing to an absent attribute within the same product (Ford & Smith, 1987), or from information about existing attributes of other products (Ross Jr & Creyer, 1992). Accordingly, Ford and Smith (1987) distinguish between an other-brand and a same-brand strategy, depending on the used source. Even though there are mixed results concerning the preference for either one of these strategies depending on the context, stronger support is given for consumers’ usage of same-brand inference processes over other-brand inferences (Russo & Dosher, 1983). Thus, consumers are likely to draw inferences from one product attribute to another before comparing the focal product with other product alternatives. These correlations are based on individual’s intuitions about the world and certain inherent relationships and can serve as an important source of product beliefs. In many cases, these inferences substitute for the search for information or even direct product experience (Broniarczyk & Alba, 1994b). Within this paper, the focus lies on inductive, memory-based inferences or, more specifically, on how consumers use specific product attributes to draw conclusions about other attributes, such as sustainability.
4.3. Qualitative Study

4.3.1. Objectives and Design

The objective is to gain an in-depth understanding of the meanings ascribed by consumers to product attributes. Such evaluations are characterized by a subjective and complex cognitive process; therefore qualitative research was identified as appropriate approach to knowledge generation (Gummesson, 2005). More specifically, an exploratory approach is employed to develop a grounded understanding of consumers’ internalized processing structures (Glaser & Strauss, 1967). This should ultimately allow gauging consumers’ inference formations about sustainability. Further guidance was provided by the long interview of McCracken (1988) and the phenomenological approach (Thompson, Locander, & Pollio, 1989), which helped to ensure a preferably nondirective interview technique and stimulate deliberate and associative statements.

Interviewees were purposively chosen to maximize structural variation (Glaser & Strauss, 1967) and recruited via a mixture of convenience and snowball sampling. In total, 23 in-depth interviews were conducted in participants’ homes which ranged from 45 to 120 minutes in length. The data collection phase was concluded at the point of theoretical saturation (Glaser & Strauss, 1967) and only repetitively emerging patterns.

Interviews covered the same topics, including general grand tour questions referring to consumers’ shopping behavior, decision making criteria and evaluation of different products.

4.3.2. Analysis and Interpretation

Interviews were conducted and transcribed partly by the researchers in order to gain more contextual knowledge and insight into the topic, as well as partly by externals in order to have a certain sequential distance to the text and its analysis. Interviews were coded according to inferences processes and trigger attributes. Several important inference
processes could be identified based on the analysis of all transcripts. For categorization purposes, the findings are structured according to different trigger attributes.

4.3.3. Results

As theorized, interviewees reveal a subjective model or understanding of socioeconomic reality which denotes that certain features or attributes of a product are inherently connected to each other. By inferring to other attributes, they construct the overall value of the product. This behavioral structure does not necessarily reflect a true causal model but only depicts interviewees’ view of reality (Miles, 1983). Consumers have formed certain theories about how things are related in the world and “the particular subject of knowledge they happen to apply can bias their interpretation of an experience and their perception of its causes and effects” (Wyer Jr, 2004, p. 202). Once such conceptualizations are established, they are very likely applied frequently and to different contexts. The following discussion is structured according to those product attributes which are often used by interviewees for inference formations about sustainability.

Quality

Sustainability is a very ambiguous attribute as it refers to an elusive concept that is – in consumers’ minds - strongly connected to quality perceptions. Accordingly, this first uncovered relationship refers to inferences about sustainability based on a product’s perceived quality:

_ I only buy organic eggs, the ones where chicken can run around freely and get only feed with herbs and grasses. On the packaging it said that it’s from one farmer close to the supermarket where I bought it. I think it is important to support local farmers and then also the taste is a lot better. And that’s quality for me. So for me, if it is a high quality product it should also be organic, I mean organic producers just care more about the whole production process and that’s what you realize then in the quality of the products. It is not about how they look like, especially the vegetables, if_
they are perfectly round or maybe shriveled, it is about whether they come from farmers rather than greenhouses (female, 29)

**Price**

Perceived price is clearly a very important proxy for assessing a product’s performance on several other attributes. For our interviewees, it is also a highly salient cue to entice inference formations about sustainability attributes. When the price is high, consumers automatically assume that the production process takes place in a socially and environmentally responsible manner:

> When I think of buying clothes, I mean there are several things I can assess: I know something about price and quality. I do not know where it was produced, and also I do not know how it was produced. But I can more or less exclude that it was made involving child labor in a low-wage country because that would be extremely outrageous if something like that is promoted as high quality (...) My experience showed me that these... cheap products made in mass production do not look like this or are presented in such a way (female, 52).

**Country-of-Origin**

A product’s origin in a developing country can trigger inferences about unsustainability, while developed countries convey a notion of socially and environmentally responsible practices. While consumers take these perceived correlations into account, they are not as pronounced as in the case of perceived price and quality. Rather than dismissing a product alternative with a perceived unfavorable country-of-origin, consumers are willing to compromise. Nevertheless, consumers use the perceived country image to infer a product’s sustainability:

> If I see where certain products come from, I know immediately that they were produced as cheaply as possible. What comes to my mind is that these people do not earn anything, they have to do hard work for a minimum wage, and then companies
export these products to the Western hemisphere just so that we can get our clothes for as little as possible. This does not mean that I am not happy if I can make a good deal when shopping. But I am feeling bad about it, when I think of what it entails (female, 62).

**Visual Appeal**

Another attribute used by consumers to form inferences about sustainability is the design of a product. However, the relationship is very ambiguous and differs from consumer to consumer. When evaluating sustainability based on good design, some consumers attribute a positive relationship. On the other hand, there are some consumers who are still prejudiced concerning unappealing aesthetics of sustainable products. Nevertheless, the visual appeal of a product does entice inference formations about sustainability:

* I do think that good design means a higher price. And I am of the opinion that more expensively designed pieces are usually made in high-wage countries due to an exceptional design. I believe that I associate a low price always with mass production and a stylish design is not mass production for me. They need good materials and skilled people to do such things and not child labor (male, 54)

* One of these companies where I like to shop is very sustainable. It started 20 years ago and back then they were producing potato sacks, I mean their clothes really looked like potato sacks. Nowadays they really have trendy clothes as well and they are really only made with organic ingredients, so not just organic cotton and then chemical dyestuff but also the coloring is organic (female, 34).

### 4.3.4. Leading and Lagging Attributes

In the context of inter-attribute inferences, it is important to further differentiate attributes according to their likelihood to elicit inference processes. Some attributes trigger an unmediated formation of inferences about sustainability and therefore describe the typical inter-attribute correlation, i.e. the “if x then y” linkage. Such attributes are labeled leading
attributes. For example, price induces consumers to immediately infer a product’s sustainability. The same applies to quality. High quality products are assumed to be produced in a sustainable and responsible way. Other attributes are not that important in inducing inferences about sustainability. Typical lagging attributes are country-of-origin and visual appeal, whose ability to elicit inferences is restricted and not very pronounced. As lagging attributes entail high levels of uncertainty, consumers tend to assess them in combination with other attributes.

4.3.5. Conceptualization of the Construct

The next step of this exploratory research study is to assess whether it is possible to conceptualize consumers’ inference formations in a measurable way. Inferences have so far been investigated primarily via the implicit association test (IAT; Greenwald, McGhee & Schwartz, 1998) or related experimental designs. These have been used, for example, to demonstrate consumers’ implicit associations concerning the tastiness of unhealthy food (Raghunathan, Naylor & Hoyer, 2006) or their assumptions of ethicality being connected to gentleness (Luchs et al., 2010). Rather than looking at one specific association, a structural model is set up to portray a more holistic view of different product attributes and their influence on inferred sustainability. Based on the rich qualitative insights and understanding, the construct domain of inferred sustainability is defined. By specifying the content domain, the scope which the latent variable is intended to capture, is set out (Diamantopoulos & Winklhofer, 2001). Defining the conceptual domain of the construct is of utmost importance and requires “the identification of what the construct is intended to conceptually represent” (MacKenzie, Podsakoff, & Podsakoff, 2011, p. 298). Given this novel methodological approach, the interviews were needed to help identify relevant attributes to be included within the model. Against the background of the qualitative findings, it is therefore necessary to assess prior conceptualizations of the four attributes used by consumers to form inferences about sustainability.

Perceived quality is a very elusive concept and not directly observable (Zeithaml, 1988). It refers to a more abstract construct than the other trigger attributes. Nevertheless,
consumers explicitly mention their quality judgments when forming inferences about a product’s sustainability. Price was found to provide consumers with important cues about the value of a product (Yoo, Donthu, & Lee, 2000), such as when price is lowered the value of a product increases (Dodds, Monroe, & Grewal, 1991). However, in terms of sustainability, there is a reverse relationship: when a price is high, consumers associate higher product sustainability. Another product attribute that has been examined in the context of inference formation is country-of-origin, which influences the interpretation of other product attributes (Brunk, 2010; Hong & Wyer, 1989, 1990). Perceived country image is a construct proposed by Magnusson et al. (2011) and specifically emphasizes consumers’ perceptions of a country-of-origin. Also the design of a product, as reflected in consumers’ perceptions of its esthetics (including material, color, size etc.) (Bloch, 1995; Lee, Ha, & Widdows, 2011) has an influence on consumers’ overall evaluation of a product. Within the qualitative study, it also became apparent that both visual appeal and perceived country image do entice consumers to form inferences about product sustainability.

Consumers infer sustainability based on perceived price, perceived quality, perceived country image and visual appeal of a product. Upon encountering these product attributes they are enticed to form stimuli-based inferences about sustainability. Accordingly, inferred sustainability conceptually represents a composite of perceived country image, perceived price, perceived quality and visual appeal. This composite reflects consumers’ inferred assessment of product sustainability. In the mind of consumers, each of these stimuli not only represents a facet of product sustainability but is also a separate construct.

The focal construct, inferred sustainability, is therefore defined as consumers’ perceptions about a product’s sustainability based on direct inferences from the high-diagnosticity attributes perceived price, perceived quality, visual appeal and perceived country-of-origin image. These attributes are a set of distinct causes, each of them depicting a specific aspect of the inferred sustainability (IS) construct domain (Diamantopoulos, Riefler, & Roth, 2008). The specification of these four indicators is considered to be sufficiently inclusive as other potential attributes result in indirect inference processes via perceived price, perceived quality, visual appeal and perceived country image. The proposed
construct domain of IS also suggests that companies should specifically take these four proxy attributes and their respective influence on sustainability perceptions into account when positioning a product.

In terms of dimensionality, inferred sustainability is proposed to be a second-order construct with four first-order dimensions, which are the attributes identified to trigger direct inference processes. These constructs therefore combine in a compensatory manner, meaning that their effects are independent of each other and a change in one of them is a sufficient but not necessary characteristic to change the meaning of inferred sustainability (MacKenzie, et al., 2011). The composite depends on the values of the forming constructs in as far as changing one of them will entice consumers to form a different inference about the product’s sustainability. All of the constructs are added together to form the second-order dimension. Thus, the conceptualization of IS as a composition of its parts requires a formative operationalization. The identified direct attributes are reflectively modeled first-order constructs and inferred sustainability is modeled formatively, as the first order dimensions are used to infer sustainability. According to the classification of Jarvis et al. (2003), the present model is a Type II, i.e. a reflective first-order and formative second-order model. Referring to the theoretical decision rules set out by Jarvis et al. (2003), the second-order construct is modeled formatively as a) the direction of causality is from the three first-order dimensions to IS, b) a change in the first-order dimensions causes a change in the IS construct rather than vice versa and c) first-order dimensions are not interchangeably and employ different themes.

4.4. Quantitative Study

4.4.1. Design & Sample

Based on the insights from the qualitative interviews, a survey is set up in which respondents go through a hypothetical purchase situation and evaluate different aspects of a pullover
based on limited information. A pullover as well-known representative of a hedonic product category serves as the focal purchase object. Hedonic consumption experiences are more likely to entice inference formations as respondents are more emotional in the purchase situation and therefore activate a larger network of associations. Inferences are especially likely to arise in regularly purchased product categories, rather than in unfamiliar ones where consumers will assess product attributes in more detail (Dodds, et al., 1991). On the other hand, products which are bought on a daily basis are most often chosen out of habit. Furthermore, as visual appeal and country of origin image have been identified as potential trigger attributes, the chosen product specifically takes these aspects into account.

Respondents were asked to answer questions referring to their decision-making in purchase situations and their evaluation of various product attributes. More specifically, they had to imagine shopping for a pullover and finding one in their favorite color, the right size and made out of 100% cotton. After having first answered questions concerning their perceptions of the product, respondents were (stepwise) offered additional information about the pullover’s price (medium priced) and country-of-origin (European country). Eventually they were asked about aspects relating to product sustainability.

The measurement of all first-order latent constructs entails the use of previously published multi-item scales. More specifically, perceived price and perceived quality items are based on Yoo et al. (2000), perceived country image items on Klein et al. (1998) and Magnusson et al. (2011), and visual appeal items on Lee et al. (2011). Additionally, three items were generated to measure inferred sustainability directly (“X seems to be a sustainable product”, “The likelihood that social and environmental aspects have been considered in the production of X is very high”, “In terms of sustainability, X is very favorable”) in order to calculate a multiple indicators multiple causes (MIMIC) model. All of the items were measured on a five-point Likert-type scale anchored at “strongly disagree” to “strongly agree”. Before the actual research was conducted, the items were assessed by a pool of 25 consumers. They were asked to evaluate all items for their clarity and conciseness as well as to pay specific attention to wording, format and layout. This pretest resulted in
minor adjustments concerning the clarification of instructions and the wording of individual questions.

After proposing the theoretical model, the data was screened. The questionnaire was sent out via email to university employees and students as well as other contacts. The total of 823 completed questionnaires was first cleared of outliers, resulting in a final sample of 810 respondents. Additionally, three respondents stated to have never bought a pullover before when being asked about prior purchase experience and were therefore excluded from the sample. This resulted in a final sample of 807 respondents, consisting of 62.2% females and 37.8% males. The age ranged from 18 to 67 years with a mean of 26 years. As recommended, 30% of all respondents were randomly assigned to a holdout sample (Hair, Ringle, & Sarstedt, 2011), which left the analysis sample with 564 respondents.

Since this research study is highly exploratory and the objective is to predict sustainability inferences, the appropriate method is PLS-SEM (Hair, et al., 2011) and SmartPLS (Ringle, et al., 2005) is therefore used for the calculations.

4.4.2. Measurement

The conceptualization of IS as a composition of other attributes’ influences requires a formative operationalization. The second-order latent variable is set up through the repeated use of all indicator variables of the first-order constructs. IS is therefore specified as a latent variable representing all the manifest variables of the first-order latent variables (Wetzels, et al., 2009). First-order latent variables are related to their manifest variables using mode A (reflective) in their outer model. The second-order construct IS is consequently related to the first-order constructs using Mode B (formative) in the inner model. Additionally, a multiple indicators multiple causes (MIMIC) model with three reflective indicator items is set up to compare the findings of the repeated indicator use. The MIMIC model should provide further assessment of the appropriateness of the formative first-order constructs.
First the psychometric properties of all items are examined in order to assess how well they relate to the latent constructs. Table 5 presents construct-to-item loadings of the reflective measures (demonstrating standardized loadings of above 0.78) as well as measures to gauge the internal consistency of the first-order constructs.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item*</th>
<th>Loading</th>
<th>CR</th>
<th>AVE</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCEIVED PRICE</td>
<td>PP1 X is expensive</td>
<td>-0.903</td>
<td>0.898</td>
<td>0.746</td>
<td>0.828</td>
</tr>
<tr>
<td></td>
<td>PP2 Pricing is favorable</td>
<td>-0.787</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PP3 X’s price is negative</td>
<td>-0.898</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERCEIVED QUALITY</td>
<td>PQ1 Must be good quality</td>
<td>0.880</td>
<td>0.920</td>
<td>0.794</td>
<td>0.870</td>
</tr>
<tr>
<td></td>
<td>PQ2 Seems reliable</td>
<td>0.896</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PQ3 Won’t last long</td>
<td>0.898</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERCEIVED COUNTRY IMAGE</td>
<td>PCI1 Positive attitude towards X</td>
<td>0.862</td>
<td>0.899</td>
<td>0.747</td>
<td>0.831</td>
</tr>
<tr>
<td></td>
<td>PCI2 Dislike products made in X</td>
<td>0.862</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PCI3 Have good feelings about X</td>
<td>0.869</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VISUAL APPEAL</td>
<td>VA1 X must be esthetically appealing</td>
<td>0.891</td>
<td>0.909</td>
<td>0.834</td>
<td>0.803</td>
</tr>
<tr>
<td></td>
<td>VA2 Won’t like looks of X</td>
<td>0.935</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Psychometric Properties and Measurement Statistics
(CR=composite reliability; AVE= average variance extracted) *Items are presented in abbreviated form; the full item battery is available upon request

To assess internal consistency, the composite reliability (CR) was calculated which consistently exceeds 0.89, as well as the Cronbach’s α values (above 0.8 in all constructs), fulfilling the strict reliability benchmark proposed by Nunnally (1978).

Moreover, there is support for discriminant validity as the average variance extracted (AVE) compellingly exceeds 0.74, as well as the squared correlations of the latent variables (LV) (Fornell-Larcker criterion) as depicted in Table 6.
<table>
<thead>
<tr>
<th>Indicators</th>
<th>Perceived Quality</th>
<th>Perceived Country Image</th>
<th>Visual Appeal</th>
<th>Perceived Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Quality 1</td>
<td>0,879</td>
<td>0,160</td>
<td>0,036</td>
<td>0,254</td>
</tr>
<tr>
<td>Perceived Quality 2</td>
<td>0,895</td>
<td>0,218</td>
<td>0,065</td>
<td>0,297</td>
</tr>
<tr>
<td>Perceived Quality 3</td>
<td>0,897</td>
<td>0,204</td>
<td>0,071</td>
<td>0,329</td>
</tr>
<tr>
<td>Perceived Country Image 1</td>
<td>0,192</td>
<td>0,862</td>
<td>0,048</td>
<td>0,096</td>
</tr>
<tr>
<td>Perceived Country Image 2</td>
<td>0,187</td>
<td>0,861</td>
<td>0,028</td>
<td>0,093</td>
</tr>
<tr>
<td>Perceived Country Image 3</td>
<td>0,189</td>
<td>0,868</td>
<td>0,061</td>
<td>0,103</td>
</tr>
<tr>
<td>Visual Appeal 1</td>
<td>0,096</td>
<td>0,064</td>
<td>0,934</td>
<td>0,225</td>
</tr>
<tr>
<td>Visual Appeal 2</td>
<td>0,013</td>
<td>0,030</td>
<td>0,891</td>
<td>0,180</td>
</tr>
<tr>
<td>Perceived Price 1</td>
<td>0,308</td>
<td>0,085</td>
<td>0,219</td>
<td>0,902</td>
</tr>
<tr>
<td>Perceived Price 2</td>
<td>0,258</td>
<td>0,095</td>
<td>0,104</td>
<td>0,786</td>
</tr>
<tr>
<td>Perceived Price 3</td>
<td>0,289</td>
<td>0,112</td>
<td>0,246</td>
<td>0,897</td>
</tr>
</tbody>
</table>

Table 7: Cross Loadings

Additional support for discriminant validity comes through the examination of indicators’ cross-loadings, which are highest on their designated constructs, as shown in Table 7.

Figure 2 presents the measurement and structural model, as well as the three reflective IS indicators for the MIMIC model. Furthermore, it shows the path coefficients of the respective proxy attributes.
4.4.3. Assessment of the Structural Model

A bootstrapping procedure (564 cases and 5000 samples, individual changes) was run to obtain the standard errors of the estimates and assess the significance of path coefficients, which are all significant at 1%.

<table>
<thead>
<tr>
<th></th>
<th>Original Sample</th>
<th>Sample Mean</th>
<th>Standard Error</th>
<th>T Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Country Image -&gt; Inferred Sustainability</td>
<td>0,332</td>
<td>0,318</td>
<td>0,052</td>
<td>6,145</td>
</tr>
<tr>
<td>Perceived Price -&gt; Inferred sustainability</td>
<td>0,495</td>
<td>0,492</td>
<td>0,028</td>
<td>17,517</td>
</tr>
<tr>
<td>Perceived Quality -&gt; Inferred Sustainability</td>
<td>0,542</td>
<td>0,539</td>
<td>0,024</td>
<td>22,238</td>
</tr>
<tr>
<td>Visual Appeal -&gt; Inferred Sustainability</td>
<td>0,155</td>
<td>0,153</td>
<td>0,050</td>
<td>3,083</td>
</tr>
</tbody>
</table>

Table 8: Total Effects Bootstrapping
Furthermore, the structural model is assessed through a blindfolding procedure with an omission distance of 7, meaning that every 7\textsuperscript{th} data point is omitted and the resulting parameter estimates are then used to predict the omitted ones. The blindfolding procedure issues the Stone-Geisser’s Q, postulating the model’s ability to correctly predict the indicators of each endogenous latent construct, which is consistently above 0.31, thereby providing support for the predictive relevance of the model.

In order to assess the validity of the second-order formative construct of inferred sustainability, a multiple indicators and multiple causes (MIMIC) model is estimated (Diamantopoulos & Winklhofer, 2001). To this end, the three reflective indicator variables are incorporated to measure IS and the model is evaluated by means of the holdout sample. The psychometric properties of the indicator variables as well as the latent constructs are similarly good as the results obtained by repeatedly using the first-order indicators. Thus, the reflective indicators provide a good benchmark for evaluating the formative construct’s external validity. Furthermore, this analysis resulted in an R\textsuperscript{2} value of 0.33 for the construct inferred sustainability.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Loading</th>
<th>CR</th>
<th>AVE</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCEIVED PRICE</td>
<td>PP1 X is expensive</td>
<td>-0.909</td>
<td>0.897</td>
<td>0.746</td>
<td>0.828</td>
</tr>
<tr>
<td></td>
<td>PP2 Pricing is favorable</td>
<td>-0.767</td>
<td>0.897</td>
<td>0.746</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PP3 X’s price is negative</td>
<td>-0.907</td>
<td>0.897</td>
<td>0.746</td>
<td></td>
</tr>
<tr>
<td>PERCEIVED QUALITY</td>
<td>PQ1 Must be good quality</td>
<td>0.871</td>
<td>0.920</td>
<td>0.793</td>
<td>0.870</td>
</tr>
<tr>
<td></td>
<td>PQ2 Seems reliable</td>
<td>0.891</td>
<td>0.920</td>
<td>0.793</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PQ3 Won’t last long</td>
<td>0.910</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERCEIVED COUNTRY IMAGE</td>
<td>PCI1 Positive attitude towards X</td>
<td>0.852</td>
<td>0.899</td>
<td>0.747</td>
<td>0.831</td>
</tr>
<tr>
<td></td>
<td>PCI2 Dislike products made in X</td>
<td>0.872</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PCI3 Have good feelings about X</td>
<td>0.868</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VISUAL APPEAL</td>
<td>VA1 X must be esthetically appealing</td>
<td>0.889</td>
<td>0.909</td>
<td>0.833</td>
<td>0.804</td>
</tr>
<tr>
<td></td>
<td>VA2 Won’t like looks of X</td>
<td>0.937</td>
<td>0.909</td>
<td>0.833</td>
<td></td>
</tr>
<tr>
<td>INFERRED</td>
<td>IS1 X seems to be a</td>
<td>0.938</td>
<td>0.935</td>
<td>0.828</td>
<td>0.895</td>
</tr>
</tbody>
</table>
Modeling inferred sustainability as second-order formative constructs renders the interpretation of this construct as an effect superfluous, as all variance has been explained by the first-order constructs (Wetzels, et al., 2009). However, the intention is to examine the respective contribution of each one of the first-order constructs which can be assessed well by looking at the total effects. Furthermore, one does not need to assume that inferred sustainability is a real entity because “constructs with formative indicators are seen as theoretical constructions (rather than real entities) that summarize (and therefore depend upon) people’s responses to the items used to represent the construct” (MacKenzie, et al., 2011, p. 303). Inferred sustainability can be thought of as a humanistic aspect of products, as proposed by Holbrook and Corfman (1985): It describes consumers’ subjective and highly relativistic response to certain product features. The formative conceptualization of IS provides interesting insights into the influence of various product attributes to form inferences about sustainability. The three developed reflective items furthermore allow us to measure inferred sustainability directly.
4.5. Discussion

Consumers are often forced to make decisions among options with incomplete attribute information. In these situations, they may either opt for not choosing any alternative to circumvent the attached uncertainty (Dhar, 1997; Greenleaf & Lehmann, 1995) or ignore the attribute in question (Ehrich & Irwin, 2005). However, consumers can also opt to form inferences about missing attributes. The purpose of this paper is to explore 1) whether consumers evaluate product sustainability in the absence of information on this issue and 2) how these inference formations look like. Inferences about missing product attributes are based on individual’s intuitions about the world and certain inherent correlations (Broniarczyk & Alba, 1994a; Raghunathan, Naylor, & Hoyer, 2006; Sujan & Dekleva, 1987).

Understanding consumers’ inference-formation processes is crucial as it influences both product evaluations and choice (Huber & McCann, 1982; Yates, Jagacinski, & Faber, 1978).

This research study provides the first empirical investigation of consumers’ inferences about sustainability attributes. The qualitative study offers in-depth insights into consumers’ cognitive processes and how sustainability is reflected in the process of product evaluations. Subsequently, a quantitative study mirrors the qualitative findings in so far as it shows the influence of proxy attributes towards inferred sustainability. The path coefficients demonstrate that perceived quality and perceived price have a higher influence on inferred sustainability than perceived country image and visual appeal. Especially visual appeal is rather weakly, but nevertheless significantly related to IS. Accordingly, this inference process is not as distinct as the others ones. Overall, the quantitative results reiterate the categorization into leading and lagging attributes. The leading attributes perceived price and perceived quality entice consumers to make strong and unmediated inferences about product sustainability, whereas lagging attributes are used supplementary. In order to take account of alternative explanations, both mediation and moderation of perceived price and perceived quality in the relationship between visual appeal and perceived country image to inferred sustainability have been tested for. However, neither one of these interactions...
yielded significant results. Accordingly, the current conceptualization of IS provides the best portrayal of the qualitative insights.

4.5.1. Research Contribution

This research breaks new ground in its investigation of inferences about sustainability attributes and offers several important contributions. It demonstrates how consumers evaluate sustainability attributes even when there is no information available on sustainability. Due to increased public awareness, consumers think about and assess a product’s sustainability when making purchase decisions. If such information is not available, they are prone to form inferences based on other observable attributes. The differentiation between direct and indirect inference formations provides additional and valuable insights into consumers’ cognitive processes. Understanding these processes is important to academia to allow for a more systematic examination of the effects of inferences on product preference or choice. Finally, the exploratory quantitative study and the conceptualization of IS as formative second-order construct address the paucity of empirical evidence for this type of model (Diamantopoulos, et al., 2008).

4.5.2. Managerial Implications

These findings have important implications for marketers who aim at a better understanding of the impact of missing attribute information. Despite its ever-increasing importance among several stakeholders, the concept of sustainability is still difficult to grasp and hardly understood by companies. This study suggests that even if companies purposely omit information on their products’ sustainability, consumers will still form theories about this attribute. Depending on the product’s attribute bundle, these formed inferences can be advantageous or disadvantageous to companies. The proposed concept suggests that companies should recognize the four attributes perceived price, perceived quality, visual appeal and perceived country image when managing the product positioning in terms of sustainability. The type of perceived correlation is important for companies to assess whether they should specifically communicate a product’s sustainability. If the correlation is
considered to be positive regardless of specific sustainability information, there is no urgent need for action. Expensive products or products with high perceived quality are automatically assumed to be sustainable. However, if a product has been made in a developing country, is rather cheap or has an exceptional design, it is advisable for companies to specifically address sustainability attributes.

Furthermore, as perceived brand origin influences brand attitude despite the potential inaccuracy of these beliefs (Magnusson, Westjohn, & Zdravkovic, 2011), consumers’ inferences concerning product sustainability can affect their preference. In many cases, these inferences replace the search for information or direct product experience (Broniarczyk & Alba, 1994b). They may even lead to the conscious ignorance of new information made available (van Osselaer & Alba, 2003). Self-generated correlations and conclusions are often more memorable and face only limited counter argumentation (Stayman & Kardes, 1992). Marketers should be aware of the fact that generated inferences can have a very persistent character. It is important to inform consumers about the actual nature of certain relationships and educate them about the benefits associated with them. Such a retroactive interference can help to reverse previously learned relationships (Tulving & Psotka, 1971).

4.5.3. Limitations and Avenues for Future Research

The likelihood of inference formation depends on several contextual factors, among others the level of expertise an individual has in a specific product category, and about certain attributes. Experts have been shown to be more easily able to both detect missing information and form moderate judgments (Kardes, Sanbonmatsu, & Herr, 1990). This interaction provides an interesting avenue for further research.

Given the lack of guidelines for assessing validity and reliability in formative models, the reported tests contain some elements of subjectivity (Cenfetelli & Bassellier, 2009; Petter, Straub, & Rai, 2007). Finally, the second-order construct was modeled by repeatedly using all manifest variables and the results further cross-checked with the MIMIC model. A different approach, which has not been investigated within the present research, would use
latent variable scores of first-order constructs as manifest variables for the second-order constructs. In general, these first empirical insights will hopefully stimulate further research in these conceptual and methodological areas.
5. Importance of Sustainability Attributes Across Product Categories: Modeling Preferences in Multivariate Paired Comparisons

Abstract

Despite increasing cognizance of the importance of sustainability, market shares of products integrating social or environmental attributes remain relatively small. This divergence puzzles both academia and industry practice. We propose that in the mind of consumers, sustainability only “fits” specific product categories and provide empirical evidence for these rather opaque demand side peculiarities. A probabilistic discrete choice design offers insights into consumers’ worth functions and our findings show that sustainability is valued differently in high and low involvement categories as well as in hedonic and utilitarian product categories. Furthermore, we identify subject-specific covariates which will allow companies to specifically address the most fruitful target groups.
5.1. Introduction

Sustainability is an important topic in today’s marketplace and awareness appears to be continuously rising among both companies and consumers (Cone, 2011; Freestone & McGoldrick, 2008). Especially companies are paying increasing attention to developing sustainable practices to gain a competitive advantage. A very recent example includes The Ethical Coffee Company, founded by a former Nespresso executive (CNBC, 2011). The company offers products positioned on high quality, an acceptable price and, above all, sustainability. While this example is indicative of a larger trend, so far sustainable products, defined as “products with positive social and/or environmental attributes” (Luchs, Naylor, Irwin, & Raghunathan, 2010, p. 18) represent only a small proportion of overall demand (UNEP, 2005b).

However, in some product categories sustainability attributes seem to be valued more than in others. Food retail and cosmetics have been reported to be building on the sustainability momentum, whereas in other product categories market shares of sustainable products do not exceed 4% (UNEP, 2005a). This suggests that sustainability attributes can either “fit” or “misfit” a product’s attribute bundle and that consumers evaluate sustainable products differently depending on the nature of the product (e.g. whether it is a high vs. low-involvement product or a hedonic vs. utilitarian product). Both academia and industry practice lack a deeper understanding of consumers’ perceptions of sustainable products – beyond the typically depicted positive attitudes. These positive attitudes have been widely reported in academic and commercial research (Brown & Dacin, 1997; Cone, 2010), but apparently do not always translate into corresponding behavior. The present research aims at closing this gap and explores when and how the integration of sustainability attributes into product positioning provides value to consumers. More specifically, we set up an experimental design with paired comparisons of generic product alternatives to estimate consumers’ preferences for sustainability attributes across three distinct product categories. The methodological focus is on the log-linear Bradley-Terry-Model which originates from mathematical psychology and is a suitable method to investigate preference structures. As a
probabilistic discrete choice model, it is based on random utility theory, as proposed by Thurstone (1927). It estimates the parameters of a worth function that consumers attach to products and their object-specific covariates. We find that sustainability attributes are valued differently depending on the product category. In addition, we show that preference structures differ according to subject-specific covariates of the respondent. The paper therefore contributes to existing literature by offering new insights into the demand side of sustainable products. More specifically, we (1) provide an empirical measurement of sustainability attributes’ impact on product preference; (2) depict subject-specific covariates important in the choice of sustainable products; and (3) identify product categories in which sustainability attributes are “suitable” in the eyes of consumers. By identifying such “suitable categories”, companies can make grounded decisions about when to offer sustainable alternatives and when to offer conventional products. Furthermore, the provision of sustainable products in categories in which they fit might entice consumers to choose them more willfully and successively embrace a more sustainable consumption pattern.

The paper is organized as follows: We first review prior literature on sustainability and consumers’ decision making. Based on this, we develop our hypotheses and consequently discuss the methodological approach. Subsequently, findings are presented and implications discussed.

5.2. Literature Review

For over a decade, research identified an enhanced sensitivity for sustainability and showed “that concern for the environment and society has mushroomed” (Roberts, 1996, p. 80). This trend appears to be unbroken, as sustainability is still increasing in importance in industry practice and academic research (Chabowski, Mena, & Gonzalez-Padron, 2011). In this context, it has been argued that consumers, rather than focusing on traditional functional or
emotional brand attributes, specifically opt for socially and environmentally responsible ones (Kotler, 2011). But despite the urge to better understand sustainability in the context of product attribute bundles, there is a paucity of research in this area. A noteworthy exception is provided by Auger et al. (2008, 2003) who report that consumers are not willing to trade off quality aspects of a product for sustainability attributes, even though the latter are valued when considered in isolation (Auger, Burke, Devinney, & Louviere, 2003; Auger, Devinney, Louviere, & Burke, 2008). Another, even more fine-grained examination into the effects of sustainability attributes demonstrates that they are valued differently depending on the benefit sought by consumers (Luchs, et al., 2010). While their existence in combination with gentleness-related attributes enhances consumers’ preference, it has negative effects when strength-related attributes are part of a product’s attribute bundle. These first insights already point towards the importance of a more detailed examination of sustainability attributes.

Products can be differentiated according to several facets. We deem consumers’ involvement with the product and its classification as either hedonic or utilitarian to be the most important for several reasons. Every day, consumers make several mundane purchase decisions as well as some others which involve a more active information-processing. Involvement broadly refers to the importance of a given purchase (Greenwald & Leavitt, 1984; Mittal, 1995; Ratchford, 1987) and describes “a person’s perceived relevance of the object based on inherent needs, values and interests” (Zaichkowsky, 1985, p. 342). Consumers’ involvement with different products leads to varying responses, such as perceptions of greater product attribute differences and overall product importance (Laurent & Kapferer, 1985; Vaughn, 1986; Zaichkowsky, 1985). Common everyday products are typically low involvement, given the little time and effort needed for decision making and the high occurrence of habitual purchases among consumers (Hoyer, 1984). However, this is also the category showing the strongest growth for sustainable alternatives. On the other hand, consumers have been reported to search for more pre-purchase information and are more aware of product attributes in high involvement categories, which points towards an increased awareness and appreciation of sustainability attributes (Lee, Herr, Kardes, & Chankon, 1999). Against the background of these diverging perspectives, we
assume that sustainability attributes have a greater impact on preferences in low involvement product categories:

**H1: Sustainability enhances product preference to a greater extent in low involvement (versus high involvement) product categories**

On a related note, products can be classified as either hedonic or utilitarian. Hedonic consumption refers to products that are emotionally involving and “designates those facets of consumer behavior that relate to the multi-sensory, fantasy and emotive aspects of one’s experience with products” (Hirschman & Holbrook, 1982, p. 92). Utilitarian consumption, on the other hand, describes how useful or beneficial a specific object is for the consumer (Batra & Ahtola, 1991). Hedonic goods provide experiential consumption and pleasure; utilitarian products provide primarily functional aspects and are bought in an efficient manner (Babin, Darden, & Griffin, 1994; Dhar & Wertenbroch, 2000). Given the focus on efficiency in utilitarian product categories and taking into account consumers’ perceptions of sustainability attributes as rather fitting to gentle products (Luchs, et al., 2010), we hypothesize the following relationship:

**H2: Sustainability enhances product preference to a greater extent in hedonic (versus utilitarian) product categories**

The benefits offered by sustainable products can be categorized to be either self-centered or other-centered. This distinction refers to whether the main beneficiary is oneself (emphasizing a more egoistic notion) or another person (emphasizing altruistic aspects) (Fisher, Vandenbosch, & Antia, 2008; White & Peloza, 2009).

Within this study, we argue that the attribute “organic” appeals more to self-centered, and the attribute “Fair Trade” to other-centered benefits. As consumers are prone to feelings of guilt when engaging in hedonic consumptions, they might take

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5 Organic products do also offer benefits to the environment and other societal members (such as farmers). However, given the prevailing rationale of consumers to buy organic products because of health-related considerations (no pesticides in food products, only natural coloring and ingredients in textiles etc.) we categorize “organic” as primarily self-centered attribute.
reparative measures to counteract these feelings (Tangney, Miller, Flicker, & Barlow, 1996). Furthermore, as guilt-experiencing consumers are more likely to participate in altruistic behavior (Darlington & Macker, 1966), we assume other-centered sustainability attributes to be more valued than self-centered ones in hedonic product categories:

**H3: Other-centered (versus self-centered) sustainability attributes enhance product preference to a greater extent in hedonic product categories**

Utilitarian products, on the other hand, are bought in an efficient and goal-oriented manner. According to the traditional economic view, consumers aim to maximize their utility when buying such objects (Hirschman & Holbrook, 1982). Sustainability attributes emphasizing self-centered benefits are more closely related to the objective of utility maximization. Thus we formulated our fourth hypothesis as follows:

**H4: Self-centered (versus other-centered) sustainability attributes enhance product preference to a greater extent in utilitarian product categories**

Despite increasing sales and growth potential, sustainable products still represent a smaller portion of sales than their conventional counterparts (UNEP, 2005a). Companies therefore face the challenge to market both sustainable as well as conventional products. Thus, the question arises on which product categories companies should focus when strengthening the sustainable option, and in which product categories they might prefer to retain the conventional orientation. This paper aims to investigate whether sustainability is more relevant in some categories than in others. The findings help companies assess how to best integrate sustainability into their product offerings and when to focus on conventional alternatives. This investigation is highly relevant as it directly relates to the impact of sustainable products on company performance and sales. In addition to this managerial contribution, our paper builds on and significantly extends literature on consumers’ choice behavior in terms of sustainability. By modeling consumers’ preferences across several product categories we provide new insights into their heterogeneous and category-specific appreciation of sustainability.
5.3. Research Approach

The overall aim of this research study is to provide a comprehensive investigation of the effects of sustainability attributes on product preference. We subsequently examine how sustainability attributes impact product preference and whether this is contingent on the previously outlined category membership as well as other subject-specific covariates.

5.3.1. Survey Design and Sample Description

We first conducted a qualitative pre-study with 17 consumers. Within unstructured in-depth interviews referring to consumers’ general consumption patterns, we learned more about routinely made purchase decisions and various important decision criteria. Based on these qualitative insights, we identified three products that best depict the respective categories (high and low involvement, hedonic and utilitarian). Furthermore, we elicited several important attributes and attribute levels which were consequently returned to the 17 interviewees to assess which of them are considered to be the most important decision criteria. The set of attributes derived from our interviewees was further evaluated by three researchers familiar to the topic and methodology, which led to a further reduction of elicited attributes. As a last step, we looked for existing products to assess whether the attribute combinations can also be found in a real world context. This process led us to the attribute combinations shown in Table 10.

<table>
<thead>
<tr>
<th>Product category</th>
<th>Hedonic</th>
<th>Utilitarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>Low-involvement</td>
<td>/</td>
</tr>
<tr>
<td>Chocolate</td>
<td>Shower gel</td>
<td>Pullover</td>
</tr>
<tr>
<td>Size/Material</td>
<td>37g bar</td>
<td>250ml</td>
</tr>
<tr>
<td>Taste/Appeal/Design</td>
<td>Milk Chocolate</td>
<td>Refreshing</td>
</tr>
<tr>
<td>Country of origin</td>
<td>Germany</td>
<td>Germany</td>
</tr>
<tr>
<td>Romania</td>
<td>Romania</td>
<td>Romania</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Fair Trade</td>
<td>Fair Trade</td>
</tr>
<tr>
<td>100% organic</td>
<td>100% organic</td>
<td>100% organic</td>
</tr>
</tbody>
</table>

Table 10: Product Categorization and Attribute Levels
Within this paper, we model unconstrained preferences as we do not impose any purchase restrictions on consumers and furthermore do not include price as attribute. Consumers can therefore freely choose the most preferred product, rather than being influenced by budgetary considerations. For a detailed investigation of the influence of product price on preferences please refer to Auger et al. (2003). Given that the product category is the main focus of this research study and we used a full factorial design, we only included a few other product attributes as outlined above.

Accordingly, for each of these products there are six generic variations: organic from Germany (orgG) and Romania (orgR), Fair Trade from Germany (ftG) and Romania (ftR) and conventional products, that is without sustainability attribute, from Germany (convG) and Romania (convR). This 1x1x2x3 design results in 15 paired comparisons in order to compare all objects with each other. To avoid order effects, the choice sets with each two generic variations and an undecided option were clustered into groups of five, which were assigned to respondents in a random order. Furthermore, the two objects in each choice set were randomly assigned as either first or second option.

The online questionnaire was sent out via several distributions lists, including university employees and students as well as other private companies to maximize the variation among respondents. The final sample consists of 638 completed questionnaires. 63% of respondents are females, 37% males. About half the respondents (51%) are between 18 and 24 years, another 35% is between 25 and 34 years. The rest consists of 7% between 35 and 44 years, 3% between 45 and 54, 2% between 55 and 64 years and 2% older than 65 years. 47% have completed high-school (school-leaving exam), 15% some further education (college) and 38% have a university degree. Concerning the income, the majority (59%) dispose of less than 1000 Euros per month, 24% between 1000 and 1999, 13% between 2000 and 2999, 3% more than 3000 and 1% more than 4000.
5.4. Analysis

Both from a psychological (Fishbein, 1967) as well as an economic perspective (Lancaster, 1966), it is assumed that consumers conduct a multi-attribute evaluation of products. This implies that consumers differentiate between products based on the existence and value of specific attributes, which further vary according to the utility consumers attach to them. The basic Bradley-Terry model (Bradley & Terry, 1952) describes the probability that j is preferred to k in a comparison of objects j and k \((j,k \in \{1,...,K\})\), where \(\pi\)'s are worth parameters (positive-valued parameters describing the location of the object on a preference scale) (Firth, 2005).

\[
P_{(jk)} = \frac{\pi_j}{\pi_j + \pi_k}
\]

By means of paired comparisons, we can therefore determine the scale values of specific objects on a preference continuum which would otherwise not be directly observable (Dittrich, Hatzinger, & Katzenbeisser, 1998). This judgmental task involves the repeated exposure of respondents to a set of object-pairs and asking for a choice between them. The basic form can be further extended by incorporating ties in the form of a third option, that of no preference, as represented by the parameter \(\delta\) (Davidson, 1970; Rao & Kupper, 1967).

The model can alternatively be expressed in a log-linear form by means of the following equations:

\[
\begin{align*}
\ln (m_{(jk)j}) &= \mu_{(jk)} + \lambda_j - \lambda_k \\
\ln (m_{(jk)k}) &= \mu_{(jk)} + \lambda_j + \lambda_k \\
\ln (m_{(jk)0}) &= \mu_{(jk)} + \delta
\end{align*}
\]
Where $m_{(jk)}$ refers to the expected number of preferences for object $j$, when objects $j$ and $k$ are compared and $m_{(jk)}$ to the expected number of the no preference option in this comparison.

The log-linear formulation allows incorporating subject-specific and object-specific covariates and the estimation of interaction effects (Dittrich, et al., 1998).

All estimations were conducted in R using the packages prefmod for preference models (Hatzinger, 2009) and gnm for generalized nonlinear models (Firth, 2005).

### 5.4.1. Manipulation Check

We first conducted a manipulation check to evaluate consumers’ agreement with our a priori categorization into high- and low involvement, hedonic and utilitarian products as well as other- and self-centered attributes. Using paired-samples t-tests (2-tailed), we evaluated the differences between the aggregate items for the above mentioned constructs.

There is a significant difference between our high involvement pullover ($M=7.72$, $SD=3.62$) and the low involvement chocolate ($M=14.56$, $SD=4.17$), $t(637)=-35.48$, $p<.0005$. The mean decrease in the involvement construct for the two products is 6.84 with a 95% confidence interval ranging from -7.21 to -6.46. The eta squared statistic (.66) indicates a large effect size.

When assessing the hedonic nature of the products, consumers significantly differentiate between chocolate ($M=8.98$, $SD=4.56$) and shower gel ($M=11.07$, $SD=4.28$), $t(637)=-10.16$, $p<.0005$. The mean decrease in hedonism scores is 2.08 with a 95% confidence interval (-2.49, -1.68) and the eta squared statistic (.14) equals the threshold for large effects as proposed by Cohen (1988). As suspected, consumers agree with our categorization of chocolate as hedonic product. Similarly, consumers consider the shower gel ($M=6.01$, $SD=2.43$) to be more representative for a utilitarian product than chocolate ($M=8.75$, $SD=2.58$), $t(637)=23.18$, $p<.0005$. The mean increase is 2.74 (95% confidence interval from 2.51 to 2.97) and the eta squared statistic 0.45.
Finally we examine whether consumers agree with our assessment of the attribute “Fair Trade” to be other-centered and the attribute “organic” to be self-centered. As proposed, respondents consider the focus to be significantly different between “organic” (M=8.44, SD=4.33) and “Fair Trade” (M=14.96, SD=4.73), t(637)=-28.44, p<.0005. The mean decreases by 6.51 (-6.96, -6.06) and a large effect size is indicated by the eta squared statistic of .56.

Similar results to the significant differences between aggregate items can be obtained by comparing each individual item among all three product domains via one-way repeated measures ANOVA. We can therefore conclude that these three products are appropriate representatives of the focal product categories.

5.5. Results

We first estimated the basic log-linear Bradley-Terry model (LLBT) for all three products. In the case of chocolate, we found that the organic product from Germany was the most preferred one, followed by the conventional German product. Consumers clearly prefer German products over Romanian ones, regardless of whether they incorporate sustainability attributes or not. The negative value of the estimated δ parameter (which describes the “no choice” option) demonstrates respondents’ tendency to make a choice between the presented products.

| Para. | Product | Estimate | Std. Error | z value | Pr(<|z|) |
|-------|---------|----------|------------|---------|---------|
| λ1    | orgG   | 1.351    | 0.033      | 39.958  | <2e-16 *** |
| λ2    | orgR   | 0.371    | 0.028      | 12.934  | <2e-16 *** |
| λ3    | ftG    | 0.800    | 0.029      | 26.695  | <2e-16 *** |
| λ4    | ftR    | 0.158    | 0.028      | 5.505   | 3.7e-08 *** |
| λ5    | convG  | 1.077    | 0.031      | 34.117  | <2e-16 *** |
| λ6    | convR  | 0.000    | NA         | NA      | NA      |
| δ     |        | -1.078   | 0.032      | -33.057 | <2e-16 *** |

Table 11: Basic LLBT Estimates Chocolate
When choosing among pullovers, consumers show a similarly strong tendency to make decisions based on the country of origin. Again, conventional products are the most strongly preferred ones, immediately followed by organic ones. The small difference between these two is surprising in as far as many consumers still have prejudices concerning unappealing esthetics of sustainable clothes. Recent efforts to offer organic cotton and other natural fabrics by big brands such as H&M might have helped to counteract this tendency. As in the case of chocolate, consumers are likely to choose either one of the generic options rather than the tie.

| Param | Product | Estimate | Std. Error | z value | Pr(>|z|) |
|-------|---------|----------|------------|---------|----------|
| λ1    | orgG    | 0.711    | 0.0276     | 25.743  | <2e-16 *** |
| λ2    | orgR    | 0.093    | 0.0262     | 3.545   | 0.00039 *** |
| λ3    | ftG     | 0.456    | 0.0265     | 17.217  | <2e-16 *** |
| λ4    | ftR     | 0.068    | 0.0262     | 2.610   | 0.009042 ** |
| λ5    | convG   | 0.725    | 0.0277     | 26.157  | <2e-16 *** |
| λ6    | convR   | 0.000    | NA         | NA      | NA       |
| δ     |         | -1.078   | 0.0326     | -36.419 | <2e-16 *** |

Table 12: Basic LLBT Estimates Pullover

The results from the shower gel LLBT model differ vastly from the previous categories. In this case, country of origin does not dictate the decision but consumers clearly opt for the conventional rather than the sustainable products. A possible explanation refers to the benefit sought by consumers (Luchs, et al., 2010). Given that sustainability attributes are associated with gentleness, consumers might not specifically value them in utilitarian product categories. Furthermore, the positive δ parameter indicates consumers’ increased tendency to make no choice among the offered alternatives. This finding is in line with our argumentation concerning habitual purchases in utilitarian product categories. If consumers typically choose a certain brand they are more likely to choose the tie when being confronted with generic product alternatives.
**5.5.1. Interactions with Subject-Specific Covariates**

In a next step, we incorporated categorical covariates into the model by creating dummy variables for three demographic criteria: gender (female and male), education (low (i.e. school-leaving exam) and high (i.e. at least college degree)) and income (low (i.e. up to 1000€ monthly disposable income) and high (above 1000€)).

Subject covariates were estimated for all of the three product categories. For each of them, we started by comparing the saturated model including all three way interactions with a model including all two way interactions. This was further compared with a model containing all main effects, which is consequently contrasted with the null model (Christensen, 1997). This backward model selection has the advantage to continuously compare the current model with a better fitting one. The significance of the differences between the models was tested via ANOVA analysis.

In the case of shower gel, we need the three-way interaction, meaning that all these demographic variables as well as their interactions are important and valuable to explain preferences for specific utilitarian products. Table 14 portrays the model selection process.
The part worths of the final model including all significant subject covariates look as follows:

![Figure 3: Worth Estimates Final Model Shower Gel](image)

On the whole there is not much difference with the exception of male respondents with high education who show a stronger preference for sustainable products. Another interesting finding relates to male and female respondents with both a low education and a low income, as these segments show a stronger preference for conventional Romanian products than the
other groups. This might potentially stem from assuming that these products have a lower price compared to the sustainable alternatives.

<table>
<thead>
<tr>
<th>CHOCOLATE</th>
<th>Resid.Df</th>
<th>Resid.Dev</th>
<th>Df</th>
<th>Deviance</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-way interaction M3=g<em>i</em>e</td>
<td>199</td>
<td>905.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>all 2-way interactions M2=g<em>i+g</em>e+i*e</td>
<td>204</td>
<td>909.31</td>
<td>-5</td>
<td>-3.553</td>
<td>0.616</td>
</tr>
<tr>
<td>all main effects M1=g+i+e</td>
<td>219</td>
<td>936.12</td>
<td>-15</td>
<td>-26.809</td>
<td>0.030</td>
</tr>
<tr>
<td>null model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 15: Model Estimation Process Chocolate

In the case of chocolate, we are able to dissociate from the saturated model and move to the more simplistic model M2 (as shown in Table 15), as the interaction of all three demographic variables does not provide significantly better insights. However, we need at least one 2-way interaction. In order to determine which one, we successively assessed the model tree components and the reduction of the model can be executed up to the interaction of education with income. Afterwards, the removal of the interaction effect does significantly worsen the model estimates.
Figure 4: Model Tree Chocolate

Figure 5: Worth Parameters Final Model Chocolate
Based on the graphical illustration of the final model's part worths as shown in Figure 5, we can clearly see that organic products are highly valued in the case of chocolate. Also German Fair Trade products rank high among consumers’ preferences. This might be due to the fact that consumers are more educated about sustainability attributes in these kind of categories (a similar example could be coffee) as these were the first ones to adopt environmental and/or social attributes.

<table>
<thead>
<tr>
<th>PULLOVER</th>
<th>Resid.Df</th>
<th>Resid.Dev</th>
<th>Df</th>
<th>Deviance</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-way interaction</td>
<td>M3=g<em>i</em>e</td>
<td>199</td>
<td>768.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>all 2-way interactions</td>
<td>M2=g<em>i+g</em>e+i*e</td>
<td>204</td>
<td>771.22</td>
<td>-5</td>
<td>-3.099</td>
</tr>
<tr>
<td>all main effects</td>
<td>M1=g+i+e</td>
<td>219</td>
<td>782.10</td>
<td>-15</td>
<td>-10.88</td>
</tr>
<tr>
<td>null model</td>
<td>M0= 1</td>
<td>234</td>
<td>870.81</td>
<td>-15</td>
<td>-88.714</td>
</tr>
</tbody>
</table>

Table 16: Model Estimation Process Pullover

In the case of pullovers, we see that we need at least one main effect by comparing M0 with M1. In order to determine which one, we successively assessed the model tree components. Because we know that we neither need the three-way interaction nor any two-way interaction, we start the backward reduction based on M1 including all main effects.

Figure 6: Model Tree Pullover
Based on the backward selection, it is obvious that only the main effects of income and education provide valuable insights for segmentation purposes. More specifically, respondents with a high education prefer organic over conventional products, regardless of their income level. Furthermore, compared to their less educated counterparts, they assign the least value to conventional Romanian rather than Fair Trade products.

5.5.2. Hypotheses

After examining the influence of subject-specific covariates on preference structures, we assessed our hypotheses. In order to test hypothesis 1, we took the 638 responses of all 15 pullover comparisons and added them to the 638 responses of all 15 chocolate comparisons. Next, we created a further dummy-coded subject-covariate to categorize the first 638 responses (chocolate comparisons) as low involvement and the other 638 responses

Figure 7: Worth Parameters Final Model Pullover
(pullover responses) as high involvement. The four objects including either one of the sustainability attributes are grouped into one object covariates, the two conventional products in another one. We then estimated the LLBT with two object- and one subject-specific covariate. Table 17 presents the coefficient estimates for sustainability attributes compared to the reference category of conventional products.

<table>
<thead>
<tr>
<th></th>
<th>Low involvement</th>
<th>High involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability attributes</td>
<td>-0.454 (0.016)</td>
<td>-0.557 (0.023)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>0.287</th>
<th>0.246</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability attributes</td>
<td>0.712</td>
<td>0.753</td>
</tr>
</tbody>
</table>

Table 17: LLBT Estimates for the Comparison High- versus Low- involvement

We can see that products with sustainability attributes are generally less preferred than conventional ones. However, the coefficient estimates point toward a difference according to involvement category as preference for sustainable attributes is even lower in high than in low involvement categories. In order to assess whether this difference is significant, we compared the two 95% confidence intervals. The intervals of sustainability attributes in the low involvement category (-0.487, -0.420) and the high involvement category (-0.603, -0.511) do not overlap, indicating a significant difference of consumers’ appreciation of sustainability attributes between these product domains. We can therefore accept H1.

We used a similar approach to test H2 and the difference between hedonic and utilitarian products. The chocolate responses were coded as hedonic and the shower gel responses as utilitarian. Again we classified the six objects into either containing sustainability attributes or representing conventional products and estimated a LLBT model.
Based on the coefficient estimates and worth parameters, we see that sustainability is slightly more important in hedonic than in utilitarian product categories. In order to check whether the interaction between the product category and sustainability attributes is significant, we looked at the 95% confidence interval of sustainability attributes in the hedonic product category (-0.500 - 0.429) and in the utilitarian product category (-0.536 - 0.436). Because these two intervals overlap we cannot reject the null hypothesis assuming no significant difference between the two product categories. H2 is not accepted as consumers do not value sustainability differently in hedonic and utilitarian product categories.

In order to assess hypotheses 3 and 4, we further categorized sustainability attributes according to whether they are primarily self-centered (i.e. organic) or other-centered (i.e. fair trade). We then estimated the LLBT with three object-covariates (i.e. self-centered, other-centered and conventional) and one subject-covariate (i.e. hedonic or utilitarian).

### Table 18: LLBT Estimates for the Comparison Hedonic versus Utilitarian

<table>
<thead>
<tr>
<th>Coefficient estimates (SE)</th>
<th>Hedonic</th>
<th>Utilitarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability attributes</td>
<td>-0.464 (0.018)</td>
<td>-0.486 (0.025)</td>
</tr>
<tr>
<td><strong>Worth parameters</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainability attributes</td>
<td>0.283</td>
<td>0.274</td>
</tr>
<tr>
<td>Conventional products</td>
<td>0.716</td>
<td>0.725</td>
</tr>
</tbody>
</table>

### Table 19: LLBT Estimates for Self- and Other-centered Attributes in Hedonic and Utilitarian Product Categories

<table>
<thead>
<tr>
<th>Coefficient estimates (SE)</th>
<th>Hedonic</th>
<th>Utilitarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-centered attributes</td>
<td>-0.491 (0.0195)</td>
<td>-0.462 (0.0272)</td>
</tr>
<tr>
<td>Other-centered attributes</td>
<td>-0.408 (0.0196)</td>
<td>-0.475 (0.0273)</td>
</tr>
<tr>
<td><strong>Worth parameters</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-centered attributes</td>
<td>0.205</td>
<td>0.222</td>
</tr>
<tr>
<td>Other-centered attributes</td>
<td>0.243</td>
<td>0.216</td>
</tr>
<tr>
<td>Conventional products</td>
<td>0.558</td>
<td>0.560</td>
</tr>
</tbody>
</table>
We first conducted a Wald-type test to assess whether there is a significant difference between other- and self-centered attributes within the same product category. Accordingly, we use the N(0,1)-distributed test statistic as proposed by Fischer and Scheiblechner (1970) to compare the item parameters for the two subgroups other-centered and self-centered both within the hedonic as well as in the utilitarian product category:

\[ z = \frac{\beta_{1} - \beta_{2}}{\sqrt{\text{Var}_{1} - \text{Var}_{2}}} \]

Within the hedonic product category, the test yields a z-value of 42.07609 and consequently a significant p-value. In the utilitarian category, the z-value is -5.381, likewise indicating a
significant p-value. Accordingly, Fair Trade products are significantly preferred over organic products in hedonic product categories, whereas it is the reverse in utilitarian categories.

To assess whether there is a difference between the preference for other-centered attributes across the product categories, we looked at the 95% confidence intervals in the hedonic (-0.447 - 0.370) and utilitarian category (-0.529 - 0.422). As there is a slight overlap, we also looked at the 90% interval, in which case there is a significant difference between preference for other-centered attributes in hedonic(-0.440 - 0.376) and utilitarian categories (-0.520 - 0.430). Thus, Fair Trade products are significantly more preferred in hedonic versus utilitarian product categories, which is in line with our hypothesis 3.

Similarly, we looked at the difference between the preference for self-centered attributes in hedonic and utilitarian product categories – however confidence intervals of the coefficients estimates overlap both at a 95% interval (-0.530 - 0.453 (hedonic) vs. -0.515 - 0.408 (utilitarian)) and at a 90% interval (-0.523 - 0.459 (hedonic) vs. -0.507 - 0.417 (utilitarian)). Thus, self-centered attributes are not valued differently according to product category and we can therefore not accept our hypothesis 4.

5.6. Conclusion

Consumers increasingly state their intention to opt for sustainable product attributes (Kotler, 2011) but market shares of sustainable products are still rather small and also vary across different categories. These controversial signals challenge companies to wisely choose the product categories in which to offer sustainable alternatives. Both academia and industry practice still lack a sufficient understanding of consumers’ evaluations of sustainability attributes beyond the typically reported positive attitudes. The present research constitutes an important step to gaining such an in-depth understanding.

By means of an experimental choice design, we assess the preferences that consumers attach to sustainability attributes across high and low involvement as well as hedonic and
utilitarian product categories. We find that involvement interacts with preference as consumers value sustainability more in low than in high involvement products. This is in line with actual market data demonstrating the rise of sustainable products in the area of groceries and FMCGs (UNEP, 2005a). Other than hypothesized, consumers do not value sustainability differently in hedonic and utilitarian product categories. However, in the former it is more advisable to integrate other-centered sustainability attributes (such as Fair Trade), as hedonic products might entice consumers to make more altruistic decisions. This finding is especially interesting given the fact that our hedonic representative is chocolate and, as food product, even more likely to increase consumers’ preference for organic ingredients due to health considerations. Furthermore, we investigate the influence of demographic variables on preference structures and find that especially the level of education impacts the choice for sustainable products, in that highly educated consumers significantly prefer sustainable products compared to consumers with low education.

In summary our findings provide companies with the following important insights: 1) In order to entice consumers to choose sustainable products over their conventional alternatives, it is best to integrate sustainability aspects into low involvement categories. 2) In terms of the specific attribute to be incorporated, it is advisable to choose other-centered attributes in hedonic product categories, in particular in the case of non-food products. 3) When targeting potential customers, it is advisable to segment them first of all according to their education level, as this aspect will most likely influence their choice for sustainable products.

The contributions of this research study for academia are similarly manifold, as we provide insights into the under researched demand side of sustainability attributes and offer findings beyond the typically reported attitudinal results. By decomposing sustainability attributes into two practically and theoretically relevant appeals, we offer a more fine-grained examination of the effects of sustainability on product preference. The application of the log-linear Bradley-Terry model allows calculating consumers’ specific preference structures and demonstrating the varying influence of sustainability attributes in different product categories.
There are also some limitations attached to our research endeavor, especially given its focus on stated rather than revealed preferences. First and foremost, this relates to external validity issues: we examine consumers’ expressed preferences in pre-defined hypothetical situations (Moshe Ben-Akiva, Morikawa, & Shiroishi, 1992). In a real-life context, other attributes would strongly impact the final decision, first and foremost price as well as the brand of the respective product. We have tried to take account of external validity issues by using products with attribute combinations as they exist in real world. Therefore, our hypothetical decision making protocol does not differ from a real choice context in terms of the attribute combinations; however, we only provide respondents with a limited picture of the overall attribute bundles. Despite our efforts to create a realistically designed choice experiment, we cannot control for other context effects, such as respondents’ inferences about a specific price or brand (M. Ben-Akiva et al., 1994). As with any model incorporating stated preference data, the consistency with actual market behavior is questionable and we herewith stress the importance to verify our findings with revealed preference data in future research endeavors. Furthermore, our choice of a pullover as representative of high involvement product categories is valid in the case at hand but there are clearly other products which necessitate even more involvement, such as for example car purchases. Finally, our respondents’ strong focus on the country of origin might have a biasing influence and we strongly encourage replicating similar designs without reporting this attribute. We hope that our findings encourage further investigations into this important topic area and believe that our paper offers fruitful avenues for subsequent research.
6. Key Findings of the Thesis and Conclusion

6.1. Summary

Sustainability has been a crucial topic for the last decades and continuously increasing in importance ever since. Consumption patterns, especially in industrialized countries, have become subject of heightened scrutiny. While public policy makers constitute the most proactive group in terms of promoting social and environmental objectives, companies have been rather slow to provide products for this “niche” segment of conscientious shoppers. Consumers, at the end of this continuum, go through complex decision making processes which are hardly understood by companies and which consumers are only partly aware of themselves. Gaining a better understanding of the peculiarities of this process can help the above mentioned constituencies to positively infer and entice more sustainable consumption patterns.

Despite the general awareness about the sustainability imperative, academic research is characterized by a paucity of investigations into consumer decision making processes at the product level. Existing research focuses on the question how companies’ efforts about sustainability and corporate social responsibility impact consumers’ perceptions concerning their image and reputation (Brunk, 2010b). Taking a product perspective, prior research has provided insights into consumers’ willingness to pay for social product features (Auger et. al., 2003) as well as their perceptions concerning the compatibility of ethicality aspects with a products’ gentleness or strength-related character (Luchs et. al., 2010).

Against this background, this dissertation provides a holistic investigation of consumers’ decision making processes with regard to sustainable products from the point they encounter a product, evaluate its aspects and choose the preferred alternative, up to their post-purchase reflections. Given the complexity of this process, four independent
studies and data collections were conducted to investigate the different stages and their respective peculiarities. Findings show that this process is even more complex and multifaceted with regard to sustainable products as such decisions entail ethical, social and environmental implications and a conscientious behavior is socially desirable. Especially in the post-purchase stage, the social desirability of purchases in conformity with the public concern regarding sustainability often occupies the minds of conscientious consumers.

Study one investigates the question why consumers do not care about social and environmental aspects when purchasing products. Qualitative interviews provided a better understanding of the importance consumers attach to various product attributes, which are assessed in a hierarchical manner upon evaluating various product offerings. The most important factors for consumers when assessing whether to consider sustainability were categorized as core factors, as they have the potential to completely inhibit the consideration of social or environmental aspects. First and foremost, consumers need to have information about these aspects in order to integrate them, whereas both level (i.e. the extent of knowledge about CSR initiatives which can range from no to extensive knowledge) and type of information are important influencing factors. Secondly, consumers need to be personally concerned about sustainability per se in order to reflect upon such issues when making purchasing decisions. Both of these factors are necessary conditions for an inclusion of CSR related aspects. Given that consumers are concerned and sufficiently informed, they will evaluate the central factor price. Price sensitivity varies greatly among consumers but for most of them, a certain price premium exists which they consider to be acceptable for sustainable products. In a last step, peripheral factors such as the image of the company, the credibility of CSR initiatives, and the influence of peer groups can further influence the likelihood of considering social or environmental aspects.

For the second study, the starting point is again consumers’ non-consideration of social and environmental aspects. However, this study focuses not on factors inhibiting a consideration within the actual decision making process but deals with consumers’ post-purchase behavior. More specifically, it investigates how consumers who have positive attitudes towards sustainability justify their contradicting behavior. Techniques of
neutralization originating from research on juvenile delinquency are applied to the qualitative data analysis and results suggest that consumers employ similar defense mechanisms. They appeal to various referentializations, such as other people or time aspects, to deflect self-blame and restore their self-image. Furthermore, such neutralizations are considered to be legitimate justifications by other societal members that render the alignment of positive attitudes and contradicting behavior possible.

Study three deals with the question whether, and if so how, consumers’ evaluate a product’s sustainability when being confronted with no information about this aspect. Qualitative interviews reveal that consumers do form some inferences about whether a product is sustainable or not. This inference formation process is triggered by other observable attributes. Within a quantitative study, four predefined proxy attributes, perceive price, perceived country image, perceived quality and visual appeal, are put together within a structural model. Inferred sustainability is incorporated as formatively modeled second-order construct and the path relations clearly demonstrate that each of these proxy attributes has a significant, but distinctive influence on inferences about product sustainability. Perceived price and perceived quality are categorized as leading attributes as they entice direct inference formations, whereas perceived country-of-origin image and visual appeal exert only an indirect influence.

The last study investigates consumers’ evaluations of sustainability when information on these attributes is clearly available. An experimental design is set up with generic product alternatives categorized as either hedonic or utilitarian, or low or high-involvement respectively. The chosen sustainability attributes “Fair Trade” and “organic” are categorized as other-centered and self-centered respectively, depending on whether they primarily provide benefits for oneself or for others. Within paired comparisons based on a full factorial design, respondents have to choose between two products and an undecided response. By means of the log linear Bradley Terry Model the utilities that consumers attach to each of the attributes within the specific product category can be calculated. Results demonstrate that consumers value sustainability more in low than in high-involvement product categories. While there is no difference in preference structures for sustainability across
hedonic and utilitarian product categories, a more fine-grained examination demonstrates that other-centered sustainability attributes are significantly preferred over self-centered ones in hedonic product categories.

6.2. Research Implications and Contributions

Based on this dissertation, several important implications and contributions for both academia and industry practice can be derived. Hereafter, the most important points corresponding to each of the four studies will be discussed.

Study one provides both academia as well as managers with a better understanding of consumers’ decision making process and factors which have to be fulfilled in order to consider social or environmental aspects within the final product choice. The classification of these factors in core, central and peripheral and their inclusion within a hierarchically ordered process offers academia with an explanation for the often encountered attitude-behavior gap. It demonstrates that even personally concerned consumers, which will deliberately report their positive attitudes about buying in a sustainable manner, will evaluate several other factors which might eventually inhibit them to act in an attitude-consistent way. For managers, these findings suggest that it is of crucial importance to make CSR related information more readily available and point out in which ways the product or the entire company is connected to CSR initiatives. Ideally, such communication would be specifically targeted to the segment of conscientious consumers. Given the central role of price within the decision-making process, companies should – whenever applicable - communicate that the products of a socially responsible company are not pricier than other products.

The second study responds to the call for research on consumers’ sense-making processes in response to sustainability (e.g. Belk et al., 2005) and provides in-depth insights into their mental strategies. For academia, the application of theoretical considerations from
delinquency research and the concurrent assessment of individual and societal response to attitude-inconsistent behavior against the background of social identity and social learning theory are particularly valuable. Furthermore, this study advances the idea of attitude-behavior inconsistencies as a dynamic process rather than a static gap and therefore provides a new perspective to an old “problem”. For companies as well as public policy makers, the knowledge of justifications and referentializations used by consumers can help to counteract unfounded perceptions and create more awareness about the implications of consumers’ decisions.

Understanding consumers’ mental processes which are investigated in study three by means of both quantitative and qualitative research is important to academia to allow for a more systematic examination of the effects of inferences on product preference and choice. Furthermore, the exploratory operationalization of inferred sustainability as a formatively modeled second order construct addresses the paucity of empirical evidence for this type of model (Diamantopoulos et al., 2008). For companies, this study provides important recommendations concerning their product positioning. Results indicate that even if they purposefully omit information about the sustainability of their products, consumers will nevertheless form theories about this aspect, which might be beneficial or detrimental depending on the product attribute bundle. Companies should be aware of the four identified proxy attributes to manage the type of inferences consumers will form concerning their products. In case a given attribute bundle will entice consumers to form negative inferences, companies should specifically address sustainability issues.

Study four builds on and extends the previous three studies by measuring stated preferences. It therefore contributes to the academic literature by providing insights into the under researched demand side of sustainable products and offering findings beyond typically reported attitudinal statements. The study decomposes sustainability attributes into two practically and theoretically relevant appeals and consequently offers a more fine-grained examination concerning the impact of sustainability on consumers’ preferences. Managerial implications are also profound, as the results clearly suggest that companies should integrate sustainability aspects in low involvement categories, choose other-centered
benefits within hedonic product categories and should segment according to the education as well as income level of consumers, since these subject-specific covariates have the greatest impact on preference structures.

6.3. Limitations and Avenues for Further Research

This section focuses on the particular limitations inherent in each one of the four studies and provides avenues for further research.

Study one suffers from a general limitation inherent to all qualitative research, namely that the results cannot be generalized and that the specific interpretation of factors and especially the hierarchical process is both influenced by the researchers’ own background as well as contingent on the respective consumer under investigation. Accordingly, future research could explore this categorization within a quantitative or cross-cultural study. Even more interestingly would be to examine the interrelatedness of the various factors and how potential feedback loops between different aspects or layers (core, central and peripheral) further influence the decision making process. Eventually, given the crucial role of sufficient information about a company’s CSR standing, future research could explore different communication strategies and their respective impact on the target group.

Being based on qualitative data collection, the findings of the second study also suffer from limited generalizability. Furthermore, within self-report measures, people tend to present themselves as positively as possible and might not always answer truthfully. Even though indirect, projective techniques have been applied to entice interviewees’ to take a third person perspective, the potential occurrence of a social desirability bias cannot be fully excluded. Due to the specific methodological focus, it is not possible to answer the question of sequencing with certainty. As suggested by Hirschi (1969), techniques of neutralization might once have been used as posteriori rationalizations and consequently internalized to retrieve them from memory before the actual decision making. This aspect could be
investigated by future research employing longitudinal data. Additionally, a large scale project involving repeated measurements could provide insights into the impact of neutralizations to the development of anomic tendencies within a society – after all, consumers are likely to imitate each others’ behavior.

Limitations of study three revolve around the methodology employed as well as some contextual aspects. First of all, given the formative specification of inferred sustainability, the construct as an effect is hardly interpretable. Furthermore, the construct could also be specified by using latent variable scores of the first-order constructs as manifest variables for the second-order construct which can be assessed and compared to the existing approach within future research endeavors. Additionally, future research could address the impact of other contextual factors such as consumers’ characteristics. As experts are more easily able to both detect missing information and form moderate judgments (Kardes, Sanbonmatsu & Herr, 1990), an investigation into the interaction of expertise and inference formation provides an interesting avenue for further research.

Within the fourth study and due to the full factorial design, there are other important attributes such as price which could not be integrated as this would have made the design too complex. Furthermore, country-of-origin has a very strong influence on preference which might have a biasing effect on the evaluation of sustainability attributes as well. It is therefore recommended that future research studies consider a slightly different attribute bundle to take account of these shortcomings. Another interesting avenue would be the comparison of the stated preferences to revealed preferences to assess the external validity of consumers’ choices within this experimental design. Furthermore, the study could be replicated by using a product higher in involvement than the pullover of study four, such as a car purchase, and see whether the results still hold true.
7. References


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