



Does Self-Attention Influence Sustainable Choices?

An Experimental Study on How Self-Attention Affects Sustainable Product Preference and the False Consensus Effect

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Preface

This master thesis is written as a part of the larger research project called “Sustainable by Design - Experimentation for Sustainable Business” (#sustainX). #sustainX is a collaboration between the Norwegian School of Economics (NHH), Inland Norway University of Applied Sciences (INUAS), and three business partners (Orkla, Umoe Restaurants and Waste IQ). #sustainX is funded through the Research Council of Norway (Grant number: 299378).

Abstract

The purpose of this research is to investigate how consumers can be influenced to act more frequently on their 'green' values and attitudes. We test whether increased self-attention has an effect on preference for the sustainable product and how the relationship is conditioned on consumers 'green identities'. We also explore whether there is a false consensus effect present for the perceived commonness of one's own opinion in regard to sustainable choices, and if these consensus estimates are influenced by self-attention. In addition, we test whether moral judgements regarding product preference is influenced by increased self-attention. A framed field experiment was conducted to collect data for this research and to capture the effect of manipulated self-attention. The results show that self-attention has a negative effect on preference for the sustainable product when an individual's environmental consciousness is high. We do not find an effect of self-attention on either consensus estimates or moral judgements. However, results do indicate the presence of a true false consensus effect for people who chose the regular product. The results reveal an opposite effect for consumers who chose the sustainable product, where they underestimate the preference of others for sustainable products. Additional findings also highlight what has been argued by previous research, namely that personal identity is an important influence on consumer behaviour.

Keywords: Green Identity, Sustainable Behaviour, Self-Attention, Self-Awareness, False Consensus Effect, Product Preference, Environmental Consciousness.

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We wanted to conduct research on sustainability and consumer behaviour in relation to sustainable choices. Being able to contribute to the ongoing research project #sustainX was therefore an excellent learning opportunity, and a great honour. The research process has been challenging, educational and highly rewarding.

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1. Introduction

1.1 Background

The environmental crisis is the biggest threat facing the global society today. Consumers have to adjust their lifestyles to lead more sustainable lives and start making choices that are in favour of the environment. There has never been more publicity around the issues of climate change. There has never been more people participating in demonstrations for the environment, and most importantly, there has never been a bigger selection of sustainable goods on the market for consumers to choose from. With all the talk about the fragile state the environment is in, it should be a reasonable assumption that people are making adjustments in their daily life to become more environmentally friendly. However, the reality seems to be another.

The fast fashion industry is booming, with retailers such as H&M and Zara on average experiencing double digit sales growth year after year (Deloitte, 2018). The fashion industry contributes to around 10% of global greenhouse gas emissions and consumes more energy than the aviation and shipping industry combined (UNFCCC, 2018). Consumption of accessories and clothing has doubled in the last few years (Ditlev-Simonsen, 2017), suggesting that people are either not educated enough, or they simply look the other way as they purchase their new winter wardrobe. Statistics also show that people are travelling more than ever (Deloitte, 2019) and there are few signs of this slowing down. Contrary to this trend, Unilever found that a third of consumers state that they favour sustainable brands over non-sustainable brands (Unilever, 2017), and millennials and Gen Z are listing climate change as their biggest concern for the future (Deloitte, 2019). In contrast, the same report also suggests that travelling and “seeing the world” is increasingly becoming a bigger priority in people’s lives (Deloitte, 2019). Considering this conflicting information, it becomes clear that there is a gap between consumer’s values and beliefs about what they should do, and their actual behaviour.

Johnstone and Tan (2015) argue that there is a discrepancy between consumers’ ‘green’ attitudes and the choices they make when confronted with environmentally friendly products in the store. The attitude-behaviour gap is a well-established phenomenon in consumer behaviour literature. It has also received a considerable amount of attention in relation to

sustainable behaviour and choices (Vermeir & Verbeke, 2006; Grimmer & Miles, 2017). Many researchers have looked at barriers to why consumers do not opt for the 'green' option when purchasing their products. Barriers such as price and product quality have both been found to impact consumers' choices (Gleim, Smith, Andrews & Cronin, 2013). With all the focus that has been put on the challenges of climate change over the last few years, it should be reasonable to assume that social norms are starting to form in regard to sustainable behaviour and hence should create standards for behaviour. However, maybe these norms are not as established as we would expect?

Some researchers have looked at the effect of increased self-attention on standard-congruent behaviour. For example, self-attention has been found to help consumers eat less of food with high fat percentage due to preconceived attitudes regarding unhealthy food (Sentryrz & Bushman, 1998). Seen in the context of a 'green' attitude-behaviour gap, it would be interesting to explore whether increased self-attention would influence consumers to act more frequently on their environmental values. A preconception for this theory is that the importance of sustainability and environmentalism is in fact reflected in consumers identities as values and norms for behaviour. Self-identity or self-concept is viewed as an important predictor for behaviour within both the sociological and psychological literature (Sparks & Shepherd, 1992). Therefore, personal identity should play a part in any inquiry into changing or predicting consumer behaviour. Recent reports show an increasing concern for environmental issues (Deloitte, 2019). Reminding consumers about their 'green' values and personal norms might influence them to opt for sustainable alternatives.

People have a tendency to project their own thoughts and opinions onto others (Ross et al. 1977). Social projection can be a valuable tool when making inference about others, especially when it comes to people we consider to be similar to ourselves (Mullen, Dovidio, Johnson & Copper, 1992). However, it can also lead to false assumptions that our own behaviour is normative. The false consensus effect is a robust psychological bias (Mullen et al. 1985) describing the tendency of people to believe that their own opinion is the most common among other peers. Thus, people might justify their own failure in choosing sustainable products because they believe that most others also fail to make these choices.

It is important for both researchers and managers to understand why consumers do not act as frequently on their environmental values as one would think, in order to find ways to overcome these barriers. Unilever has estimated a €966 opportunity for businesses that can

take advantage of environmentally friendly behaviour and clearly communicate this message to consumers (Unilever, 2017). Businesses are also catching on to the opportunities that sustainability represents, both when it comes to cutting costs, upholding reputation, and to ensure survival in industries that are, and will be, affected by regulatory and natural resource constraints (Bonini & Görner, 2011). A recent survey with respondents from the US and the UK indicates that 51% believe that personal actions can make a real difference in the world, and 45% say that maybe it makes some difference (Townsend, 2018). It is this group of “maybes” that is particularly interesting when looking at the influence of self-awareness on consumers’ choices. The environmental benefits, along with the huge market potential, makes sustainable behaviour an important research topic to investigate further.

1.2 Purpose

The purpose of this thesis is to explore how consumers can be influenced to act more frequently on their ‘green’ attitudes. We want to investigate the relationship between consumers ‘green’ identity and preference for sustainable products by exploring the effect of increased self-attention on sustainable choices. By conducting this research, we hope to contribute to theory on pro-environmental behaviour and the attitude-behaviour gap, by demonstrating how increased self-attention can lead consumers to make choices that are more consistent with their personal values.

Our research is a follow-up study to a previous master thesis by Handeland and Skogholt (2018), which found evidence indicating that the effect of self-attention, manipulated through the presence of a mirror, was conditioned on participants “green identities”. Green identity in their study was a measurement of attitudes towards sustainability and environmentally friendly behaviour. They found an interaction between the mirror conditions and green identity on preference for the sustainable product, and “expected market success” for the sustainable product, respectively. In their study, self-attention was treated as a moderator between product and choice. Our study aims to address the relationship between self-attention and product preference with green identity as a moderator. Previous research has found that self-attention has a positive effect on influencing people to make choices that are more aligned with their personal standards (Sentyrz & Bushman, 1998). Research has also suggested that when personal identity is

made salient, personal values have a larger impact on behaviour (Costa Pinto, Nique, Maurer Herter & Borges, 2016). Thus, the first research question is as follows:

RQ1: How does increased self-attention affect preference for sustainable products?

We also find the concept of expected market success to be of interest. The mirror manipulation increased participants' beliefs about market success for the product, depending on their personal preference. Researchers have previously argued that people have a tendency to overestimate the commonness of their own opinion (Ross et al., 1977). Therefore, we suspect a false consensus effect for people's inferences about the preference of others. Therefore, the second research question is:

RQ2: Does self-attention have an effect on the perceived commonness of one's own opinion?

1.3 Structure

This thesis starts with introducing the background for, and purpose of, the current research project. In chapter 2 a literature review is provided, covering theory and research that is relevant to the research questions. In chapter 3 the hypotheses are presented, supported with theory from the literature review. Then, the research design is described, and the conceptual model for our research is presented. Chapter 4 covers the methods used to conduct the experiment. Information for sampling and detailed explanations for measures and procedures used for data collection is provided. In the last part of this section the strategy for statistical analysis and testing of the hypotheses is described. The results of the study are presented in chapter 5. The section is structured after the four hypotheses respectively. Results from additional findings are also included. Chapter 6 begins with a summary of findings, followed by a general discussion where we discuss the research questions in light of the results and provide some alternative explanations for the effect of self-attention. In chapter 7, limitations and managerial implications are discussed, and suggestions for future research is presented. Finally, in chapter 8, a conclusion for the research is provided.

To clarify, the terms self-attention and self-awareness are used interchangeably throughout this thesis with no variation in the meaning intended. ‘Green’ is often used as a term for ‘environmentally friendly’ or ‘sustainable’.

2. Literature Review

2.1 Theories on Identity and Self-Concept

To understand the role of 'self' in consumer choices, it is important to consider theory on identity. At the core of identity theory is the categorisation of the self into a role and the incorporation of meanings and expectations of that role, into the self (Stets & Burke, 2000). These expectations and meanings form a set of standards that guide behaviour (Burke 1991). In social identity theory categorisation of the self is also made, however, instead of roles, the self is seen to belong to different social groups which form the basis of our social identity (Hogg & Abrams 1988 cited in Stets & Burk, 2000). A social group is a set of individuals who one identifies with. In the process of social categorisation there is also a level of comparison between people we consider to be in-group and out-group members (Stets & Burk, 2000). Both self-categorisation and social comparison are important processes in the formation of social identity. Social identity resides in the uniformity of perception and action among group members (Stets & Burk, 2000). Thus, people's behaviour is influenced by the social group in which they feel they belong to.

Identity-based motivation is a concept suggesting that beliefs regarding personal identity focuses on the norms, values, goals and strategies that are believed to exemplify a desired identity (Oyserman, 2009). Furthermore, research has found that "the salience of personal identity highlights the importance of types of intentions in a given situation, leading to judgments and behaviours that are congruent with these values" (Pinto et al., 2016, p. 744). 'Values' in this line of research is understood as types of intentions because they drive behaviour through personal standards and social norms.

Closely related to identity are theories on self-concept, which is a multidimensional construct suggesting that an individual has multiple types of self, including actual/ideal self and actual/ideal social self (Hoyer et al., 2013). Self-concept is an individual's thoughts and feelings about who they are (Jamal & Goode, 2001). According to the theory people can express these thoughts and feelings through what they purchase (Graeff, 1997). This tendency is reflected through extended-self theory and suggests that consumers incorporate products into their personal identity in order to reflect some level of who they are (Belk, 1988). Consequently, consumers' choices express some clues as to who they are and what is important to them.

2.2 Self-Awareness Theory

Self-awareness theory, developed by Duval & Wicklund (1972), suggests that attention focused on oneself should result in an awareness of personally salient characteristics and standards for behaviour (Carver & Scheier, 1978). Self-awareness is described as a state where self-directed attention is present (Fenigstein, Scheier & Buss, 1975), and that attention is focused either outward, or inward on the self as an object (Diener & Srull, 1979). Self-awareness can be induced for example through a mirror being present, a camera being directed towards the self, or with the presence of an audience (Chang & Hung, 2018). When attention is directed towards the self in this type of way, the subject is in a state of objective self-awareness (Goukens, Dewitte & Warlop, 2009), which increases reliance on the most salient aspects of the self in a given context (Carver & Scheier, 1978).

Self-awareness is further divided into two dimensions; public and private self-awareness, to which there exists a standard for behaviour (Fenigstein et al., 1975). Public self-awareness is being made self-aware by others viewing you, and private self-awareness is being made self-aware by viewing yourself (Goukens et al., 2009). Private self-attention typically induces behaviour that resonates with your personal beliefs, values and attitudes, whereas public self-attention induces societally appropriate behaviour (Froming, Walker & Lopyan, 1982). The public dimension of self-attention creates awareness of the self as a social object by looking at oneself from a third-person perspective (Chang & Hung, 2018). Research has found that privately self-aware consumers are more likely to rely heavily on their personal preferences in the decision-making process, making them less susceptible and less likely to seek variety from previous choices when making decisions (Goukens et al., 2009). When made publicly self-aware, objects tend to rely more on societal standards in the decision-making process (Diener & Srull, 1979).

Research has shown that self-aware individuals are more resistant to persuasion (Hormuth 1982; Scheier, Buss & Buss 1978). They have also been found to act more in line with their own personal values and try to reduce discrepancy between behavioural standards and their own current behaviour (Diener & Srull, 1979). Therefore, high self-awareness should increase the likelihood of following normative standards, due to the fact that the subject is made highly aware of any discrepancies between their behaviour and objectively normative standards for behaviour (Diener & Srull, 1979). An increased degree of self-awareness can

therefore change behaviour, such as decreasing the probability of cheating on a test (Diener & Wallbom, 1976).

When made aware of the private self, for example by the presence of a mirror, subjects are more prone to do an internal search for information that helps them evaluate their own behaviour (Scheier & Carver, 1983). In a privately self-aware state, subjects tend to regulate their own attitudes and behaviours in order to align them with personal standards for behaviour, aiming to maintain consistency with past behaviours and attitudes (Chang & Hung, 2018). Self-aware people are made aware of their behavioural standards and are therefore motivated to reduce their own attitude-behaviour gap (Pryor, Gibbons, Wicklund, Fazio & Hood, 1977). An alignment of own behaviour and standard tends to induce positive affect, whereas a discrepancy increases negative affect (Duval, Silvia & Lalwani, 2001, p. 65). This, in turn, increases the chances of the self-aware person working to avoid anti-normative behaviour (Diener & Srull, 1979). Self-attention can therefore be said to make a person focus more, and thus put more consideration into choices and behaviour.

There has been a consistent increase of research aiming to explore the impact of self-awareness on consumer decision making, such as product evaluation and choice (Hung & Wyer, 2011; Goukens et al., 2009). Goukens et al. (2009) argue that self-aware subjects tend to rely more on pre-existing attitudes in the decision-making process, because these attitudes are easily recalled in a self-aware state. In their study, Hung and Wyer (2011) found that, when made self-aware, people are more likely to insert themselves in an imaginary scenario of them using the products they are evaluating, consequently making it more likely for them to choose said products (Hung & Wyer, 2011).

Gendolla and Wicklund (2009) found another effect of self-attention in their study where they tested the effect of self-attention on acknowledging or discarding the perspectives of others. They found that self-focused attention boosted perspective-taking when a cue for the others' perspective was given and consequently, this reduced egocentrism (Gendolla & Wicklund, 2009). They also argue that self-attention facilitates perspective-taking because of the human standard of considering other people's viewpoints. Focusing attention on oneself forces the individual to take an external perspective and view oneself as a unit distinct from others, which is the precondition for perspective-taking (Stephenson & Wicklund, 1983).

2.3 Social Norms and Personal Norms

Norms is a construct that helps us describe and explain human behaviour (Cialdini & Trost, 1998). In the literature norms are often divided into different categories, one of which is social norms. Social norms have been widely accepted to influence behaviour. For example, in Ajzen's theory of planned behaviour, the subjective norm is the expectations of 'valued others' regarding a behaviour (Ajzen, 1991). Cialdini & Trost (1998) define social norms as "rules and standards that are understood by the members of a group, and that guide and/or constrain social behaviour without the the force of laws" (p. 152). In recent times, social norms have been linked to sustainable behaviour as a way to influence behavioural change. For example, Schultz (1999) found that social norms had an influence on curbside recycling, and Kallgren, Reno & Cialdini (2000) found that subjects conformed behaviour to norms against littering under the condition of normative focus. Cialdini and colleagues have argued for the distinction between injunctive and descriptive social norms (Cialdini & Trost, 1998). Injunctive norms are norms that tell us something about what is considered appropriate/inappropriate, while descriptive norms inform us about typical behaviour and actions of others (Cialdini, Kallgren & Reno, 1991). Which type of social norms have the most impact varies across the literature, but the influence of social norms on behavioural change and compliance is determined by the extent to which norms are made salient (Kallgren et al. 2000). Social norms are also linked to personal norms and identity. Nigbur, Lyons and Uzzell's (2010) study indicated that group identification and injunctive social norms predicted personal norms and self-identity, and descriptive social norms were useful in predicting behaviour. Consequently, it seems relevant to consider social norms when analysing people's beliefs and choices regarding sustainable choices.

Personal norms are linked to self-concept and reflect our feelings of moral obligation to perform a particular behaviour (Schwartz, 1977). Researchers have argued that behaviour is, at least to some degree, regulated by internal rather than external processes and personal norms reflect some level of internal reasoning that is independent of social expectations (Thøgersen, 2009). Even though we are motivated through our social self to adhere to social influences, research also highlights the importance of personal norms in predicting behaviour (Brown, Ham & Hughes, 2010; Doran & Larsen, 2016). Personal norms have been found to have the strongest association with behavioural intent (Doran & Larsen, 2016). In a field experiment, Brown et al., (2010) found that making personal norms salient positively

influenced the likelihood of tourists picking up litter when visiting a protected area. It has also been argued that personal norms, to some extent, can be seen as internalised social norms (Thøgersen, 2009). This is supported by several studies that have found personal norms to be a mediator in the relationship between social norms and behaviour (Thøgersen, 2009; Doran & Larsen, 2016).

2.4 False Consensus Effect

Psychologists have always been interested in how and why people make the decisions they do. The tendency to overestimate the commonness of one's own opinion and beliefs has been widely discussed in literature (Ross, Greene & House, 1977; Dawes, 1989; Marks & Miller, 1987). Many studies have demonstrated how people tend to perceive a 'false consensus' with respect to the relative commonness of their own opinion (Bauman & Geher, 2002; Wojcieszak & Price, 2009; Krueger & Zeiger, 1993). Therefore, this phenomenon has been labelled the "false consensus effect" (Ross et al., 1977). For example, if people were asked whether they believe climate change is a result of human impact or not, and then they were asked to predict the percentage of others would agree and disagree with their opinion. Research has found that people will overestimate the percentage of peers who would agree with their personal opinion. The false consensus effect is defined as people's tendency to "see their own behavioural choices and judgements as relatively common and appropriate to existing circumstances while viewing alternative responses as uncommon, deviant or inappropriate" (Ross et al., 1977, p. 280). This is the definition that will be applied for this research.

2.4.1 Perspectives on False Consensus Effect

There are numerous studies offering theoretical accounts for the false consensus bias in social perception. One question that many researchers have addressed is whether this egocentric bias is a result of unintentional perceptual distortions that help us withhold the feeling of normality, or if it is an intentional strategy we use to justify our own beliefs and

feeling of normality (Mullen, 1983). Traditionally, views on this question have been separated into non-motivational or motivational perspectives.

Marks and Miller (1987) conducted an empirical and theoretical review of research on the false consensus effect and offered four perspectives explaining the bias. The first is '*selective exposure and availability*'. This view suggests that similarities between oneself and others comes more easily to mind due to selective exposure and information on similarity being more easily accessible in memory (Mullen, 1983; Ross et al., 1977). Perhaps the most prominent research on this view is the works of Ross et al. (1977) who applied this availability heuristic to consensus estimates and provided evidence of cognitive availability being a major driver of consensus estimates. Similarly, Sherman, Presson, Chassin, Corty and Olshavsky (1983) found correlation between teens' and adults' estimates of the normality of smoking and the number of their friends who were smokers. According to this view, false consensus effect is an egocentric bias. It indicates that people use themselves or immediate people in their social circle as a reference for normative behaviour without considering the opposing view.

The second perspective is '*salience and focus of attention*'. This refers to a 'top-of-mind' phenomenon, suggesting that people's own preferred position is the most prominent in immediate consciousness (Marks and Miller, 1987). Consequently, when people have a clear opinion about something, they are less likely to consider the opposing view. Research has found that when a person's attention is focused on a particular position, whether it is one's own or someone else's, it increases perceived consensus of that position (Marks and Miller, 1985). Sherman, Presson and Chassin (1984a) found results indicating that when the 'self' is not threatened, case information and information about correctness influenced consensus estimates. The false consensus effect can be treated as an availability heuristic according to this view. When provided with relevant information about the case, people will to a larger extent take this information into account when making estimates about others. Bauman and Geher (2002, study 2) support this perspective by demonstrating that college students gave much less biased estimates after having watched a debate between other students on a given topic.

The third perspective is '*logical information processing*'. Here, causality is attributed to active reasoning and rational processes (Marks & Miller, 1987). This means people generally believe themselves and others to be rational beings who are affected by the same situational

factors (Gilovich, Jennings & Jennings, 1983). Therefore, from a logical perspective, others should have the same beliefs as oneself. Gilovich et al., (1983 study 1) found that when subjects were made to cite personal reasons for their choices, as opposed to situational reasons or no reasons at all, consensus estimates were lower. These findings were supported in their second study which found correlational evidence between false consensus and situational explanations for choice (Gilovich et al. 1983). In a study on determinants of consensus estimates, Zuckerman, Mann & Bernieri (1982, study 1) used the presence or absence of a mirror to manipulate participant's attributions to either personal or situational factors. The mirror was used to manipulate personal attributes. They found that both actors and observers gave higher consensus estimates when they were influenced to use situational reasoning (Zuckerman et al., 1982). Beyond cognitive reasoning, it is also logical for a person to rely on himself as a piece of information. Therefore, how familiar a person is with the topic he or she is being tested in, will influence the degree of which external information is taken into consideration (Alicke & Largo, 1995).

Lastly, the fourth view focuses on '*motivation*' and argues that there is a functional value involved in false consensus, like maintaining social standing, social support, self-esteem and restoring cognitive balance (Sherman, Presson & Chassin, 1984; Krueger and Zeiger, 1993; Marks & Miller, 1987). This view presents the false consensus effect as a strategy to help maintain the feeling of normality and justify one's own beliefs. In Sherman's et al., (1984a) inquiry into the underlying mechanisms of false consensus effect, results suggested that when the self was threatened, participants' estimates of consensus increased as a result of people's "need for normalization and social support" (p.136). Although the study also found support for other mechanisms of false consensus bias, its most important contribution is highlighting the role of 'self' in biased consensus estimates (Sherman et al. 1984a). Cognitive balance has been used to explain people's need to relate themselves and their opinions to people they view positively. For example, Marks & Miller (1982) found that people project their own attitudes and opinions onto 'attractive others', but did not predict the same consensus for 'unattractive others'. Social support has also been reported as a contributor to false consensus estimates (Marks & Miller, 1987). This view is specifically relevant for topics that are considered socially sensitive and personally important. For example, a person will be more motivated to justify their view on abortion, than they would on pizza toppings. That is due to the sensitivity of abortion as a topic in public society and the need to feel support from their social group.

All four of these perspectives are supported empirically, however it remains difficult to explain the underlying mechanisms using just one perspective. Nevertheless, the notion that people are highly prone to base their judgements of other people's beliefs on their own, remains strong (Mullen et al., 1985; Marks and Miller, 1987). The false consensus effect is often measured by comparing endorsers' estimates with the non-endorsers' estimates for how many would, and how many would not, endorse a proposition. However, some researchers have argued that one cannot know whether the estimates are truly false, without knowing the real number (Mullen, 1983). It is argued that consumers may know that their opinion is not endorsed by the majority of others. However, that does not mean they do not overestimate the commonness of their own opinion (Mullen, 1983).

2.4.2 Perceived Consensus in Social Judgements

When making inference about other people's opinions and beliefs, it is relevant to consider social projections theory. People assume greater similarity between themselves and others when they feel a belonging to this social group (Mullen et al., 1992). Likewise, people tend to differentiate themselves from others they do not feel belongingness too. These types of social categorisations are often referred to as in-groups and out-groups. An in-group is defined as a group of people to whom one feels a sense of belonging. These are the people we associate and compare ourselves with. Out-groups are people we consider to be different to us and whom we do not feel a sense of belonging to. Marks & Miller (1987) noted that most research on the false consensus effect has been carried out by asking participants to estimate the answers of their 'peers'. Hence, when making projections they assume a similarity between themselves and an in-group. Consequently, it is important to consider people's tendency to compare themselves with similar others because social categorisation is relevant for both motivational and cognitive mechanisms for false consensus effect (Marks & Miller, 1987).

2.5 Our Position in the Literature

People are increasingly recognising climate change as a threat to our global society. Many consumers are becoming more environmentally conscious and are seeking alternative options to unsustainable products. However, it is clear that there is still a significant gap between consumers' attitudes towards sustainability and behaviours that reflect these attitudes. Therefore, we want to look at the effect of self-attention on sustainable product preferences and whether people overestimate the commonness of their own choices. Understanding this bias in consensus estimations is important considering the impact of such estimates on various attributional judgements. Therefore, insight into the magnitude and the consistency of this bias is important in order to understand, and perhaps influence, social judgements and inference (Gilovich et al., 1983).

There have been many studies focusing on the effect of increased self-attention. However, there is, to our knowledge, not much research on the effect of increased self-attention on sustainable product preferences and how this is influenced by an individual's 'green identity'. Based on our review of the literature we consider 'green identity' to reflect an individual's values and personal norms in regard to environmental issues and sustainable behaviour. The link between identity and behaviour is through the theory of extended self (Belk, 1988). The theory argues the incorporation of products into one's personal identity, meaning that purchasing behaviour reflects, on some level, who we are and what is important to us. Identity motivation theory suggests that when consumers personal identity is made salient it should highlight the values relevant in that given situation (Oyserman, 2009). Consequently, when faced with the choice between a sustainable and a regular product, high self-attention should influence consumers to choose the product that is most congruent with their identity.

3. Research Methodology and Hypotheses

In the following section we will discuss our hypotheses, developed from the review of the literature. Then, we will describe the research design and present a research model to visualise the proposed relationship between self-attention and product preference. Lastly, methods for data collection and statistical analysis will be discussed.

3.1 Hypotheses

It has been argued that increased self-attention will make individuals more aware of themselves and their personal beliefs, as well as societal norms (Carver & Scheier, 1978). Furthermore, when made privately self-aware, for example by the presence of a mirror, people are more prone to do an internal search of information that can help them evaluate their own behaviour (Scheier & Carver, 1983). Self-aware people are made more aware of behavioural standards, which motivates them to reduce the discrepancy between personal standards and behaviour (Pryor et al., 1977). Therefore, if a consumer's personal norms and values reflect sustainable attitudes and environmental concern, it is likely that self-attention will lead him to choose the sustainable option. We will construct a variable labelled 'environmental consciousness' to reflect these aspects of the self, in order to measure participants' 'green identity'. If consumers score low on the environmental consciousness scale, it is reasonable to believe that they do not internalise sustainable behaviour as a personal standard, and therefore do not choose the sustainable option. Consequently, the first hypothesis is:

H₁: High self-attention increases (decreases) preferences for sustainable products among environmentally conscious (non-conscious) consumers

Our research model aims to explore the relationship between self-attention and product preference, using environmental consciousness as a moderator in the proposed relationship. Results from previous research (Handeland & Skogholt 2018), suggest a tendency for people to believe that others would also prefer the product that they themselves prefer. This leads us to believe that people are biased due to a false consensus effect. The false consensus effect is the tendency for people to believe that others are similar to themselves (Ross et al., 1977). Self-awareness theory suggests that when attention is focused on oneself it increases the

aspects of the self that are the most salient at that point in time (Carver & Scheier, 1978). Hence, when faced with two choices, values in regard to these two choices should become more salient. Research on the false consensus effect has found several mechanisms explaining the bias. We argue that when people are made self-aware, their own personal standards and opinions become more salient, and therefore more easily accessible in memory. This view is supported in Marks and Miller's (1987) review of research on the false consensus effect. Therefore, hypothesis 2a is:

H_{2a}: When self-attention is high, respondents are more likely to give higher consensus estimates for their own product preference

Research on the false consensus effect can be split into motivational and non-motivational views. Some researchers have argued that Ross' et al. (1977) original way of measuring the false consensus effect does not take into account the 'truth', and therefore cannot be labelled false (Krueger & Clement, 1994; Mullen, 1983). For example, a person who holds an extreme opinion will often be aware that this opinion is not shared by a majority of others. However, he may still overestimate the percentage of others he believes agrees with him compared to the actual number. "Egocentric bias in estimates of consensus could be interpreted to foster and/or to justify actors' feelings that their own behavioural choices are appropriate, normal and rational" (Mullen, 1983 p. 32). Based on this, hypothesis 2b is:

H_{2b}: Consumers who choose the regular product overestimate the commonness of their own opinion to a larger degree than consumers who choose the sustainable product, thereby demonstrating true false consensus

The last hypothesis is based on the robustness of the false consensus effect and the notion that when one's personal beliefs become salient; people will see their own preference as being the "right" opinion. As previously mentioned, self-awareness motivates an individual to decrease the discrepancy between their behaviour and standards for behaviour (Diener & Srull, 1979). When made self-aware, one's own opinion becomes more salient and therefore more accessible in memory, and consequently, people are more likely to think that others *should* choose the same product as themselves. We therefore propose that even when a moral element is introduced, like what others *should* do, people will choose the same option as they themselves choose. Therefore, the third hypothesis is as follows:

H₃: Self-attention increases consumers' moral beliefs that others should choose the same product as themselves

3.2 Research Design

The aim of this research is to explore the influence of increased self-attention on sustainable product preferences and false consensus. Therefore, we will apply an explanatory research design to answer our research question. Specifically, we will conduct a framed field experiment to capture the effect of heightened self-awareness on consumers' consensus estimates. A field experiment offers a more natural setting (in-store) than a laboratory setting (Harrison & List, 2004), which can make the results more generalisable, and thus offer stronger external validity (Saunders, Lewis & Thornhill, 2016, p. 400). A framed field experiment uses a non-standard subject pool, and a field context for either the commodity, task or information set that the subjects are exposed to (Harrison & List, 2004).

This study will use a between-subjects design with a within-subject manipulation (stimuli) of the product preference variable. The experimental group will be exposed to a mirror when making a choice between two products (sustainable vs. non-sustainable drain opener), followed by estimating the percentage of others who would make the same choice. The control group will follow the same procedure with no mirror present. A mirror will be used to manipulate self-awareness, as several studies have found that the presence of a mirror heightens self-attention by bringing attention to the private self (Carver & Scheier, 1978; Goukens et al., 2009 & Jami, 2016). A between-subjects design is appropriate for our research, because we wish to investigate the effect of manipulating degree of self-awareness (high/low) on product preference and consensus estimates. Once consumers are asked to make a choice between A or B, it is likely that this choice would influence their decision if asked to make the similar choice again (Charness, Gneezy & Kuhn, 2011). Therefore, a between-subjects design is necessary to record the influence of self-awareness. The independent variable in our research will be self-attention, which consists of two levels, low vs. high. Product preference is our dependent variable, and the relationship is moderated by environmental consciousness, which is a variable measuring personal norms reflecting people's identity. In addition, we will test the effect of self-awareness on two other dependent variables, namely consensus estimates and moral beliefs. Consensus estimates

will be measured by asking participants to estimate what percentage of others they believe would choose the same product as themselves. Moral beliefs will be measured by asking participants to choose which product others *should* choose.

		Between-subject factors	
		Control group (No-mirror)	Experimental group (Mirror)
Whitin-subject factors	Drain opener with 100% natural ingredients	Drain opener with 100% natural ingredients	
	Regular drain opener	Regular drain opener	

Figure 3.1: Overview of between- and within-subject factors

3.3 Proposed Research Model

Based on the hypotheses presented above we propose a simple moderation model to investigate the effect of self-attention on sustainable product preferences. We predict that increased self-attention influences consumers to choose more in line with their personal beliefs. Therefore, a consumer with increased self-attention will be more likely to choose the sustainable option, given that environmental concern is central to their identity. Likewise, a consumer who does not recognise environmentalism or sustainability as important concepts, will be more likely to choose the regular product when self-attention is high. This gives us a simple moderation model, where environmental consciousness acts a moderator in the relationship between self-attention and product preference. The false consensus effect will be measured after product preference. The prediction is that when made self-aware, the salience of a consumer's own opinion increases and therefore, the tendency to overestimate the commonness of one's own opinion also increases.

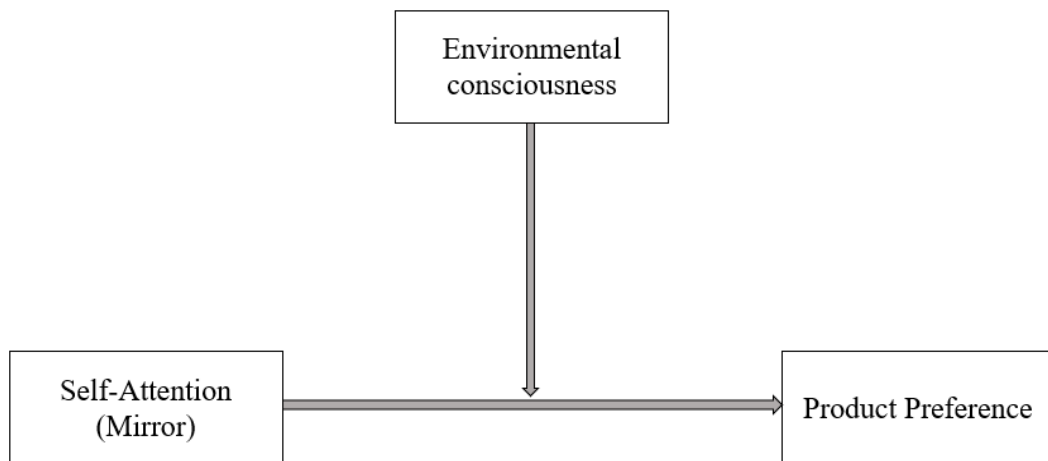


Figure 3.2: Conceptual Research Model

A moderation model explains the effect of X on Y conditional on W (Hayes, 2018). Thus, the moderator explains ‘when’ the independent and dependent variables are related. The moderator variable changes the direction or magnitude of the proposed relationship between X and Y . Below, we present the statistical model for our research, where b_1 represents the direct effect of X on Y , and the conditional effect of X on $Y = (b_1 + b_3W)$ (Hayes, 2018).

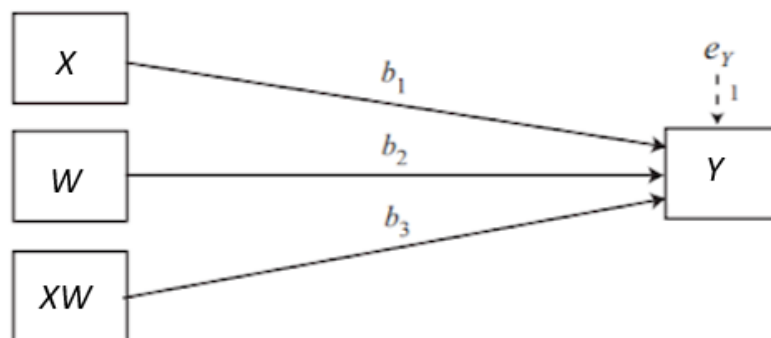


Figure 3.3: Statistical diagram of Simple Moderation Model (Hayes, 2018)

4. Method for Field Experiment

In this chapter we will describe the sampling and recruitment process, present the stimuli, measurements and procedure for the experiment. The chapter also includes a plan for the statistical analyses that will be used to test the hypotheses.

4.1 Sampling and Recruitment

The experiment was conducted at Vestkanten Storsenter in Bergen over the course of four weekdays. We chose to conduct the experiment at a shopping centre because we believed it would allow us to collect a sample that is representative for the wider public. This will increase the generalisability of our study. It also seems reasonable to believe that people at a shopping centre are within the target population for household products such as drain openers. Considering our research is a follow-up study to a previous experiment which was also conducted at a shopping centre, using a similar sample will allow us to compare the results with findings from the previous study.

Participating in the experiment was completely voluntary, and all participants were recruited in the field. A sign was placed next to the cubicles explaining that this was an experiment for our master thesis, and that each participant would receive a gift card worth 70 NOK after completing the survey. In addition to the sign, the researchers also recruited participants by engaging in conversation with people who were passing by. Subjects were randomly assigned to one of the two cubicles, depending on which one was free at the time. In total, 210 unique responses were gathered, all completing the survey with no non-response errors. The participants ranged in ages between 18 and 76¹ years old ($M=41.66$, $SD=15.30$). The sample consisted of 56.7% women and 42.9% men. One person (0.5%) did not want to declare their gender.

¹ One extreme value for age was removed.

4.2 Stimuli

Two fictitious products (drain-openers) named SERA were used as within-subjects manipulation during the experiment. Research has shown that respondents tend to give better answers when they are exposed to physical product material (Klatzky, Lederman, & Reed, 1987). Therefore, using two physical products helps establish external validity of our study. SERA is a fictitious brand developed for previous master theses within the research project “Circular Economy and Green Consumer Behavior”. The products had a neutral design and looked like regular drain openers. The only difference between the two products was that one had a tagline that read “100% natural ingredients”. The standard design included the logo and the product title “drain opener”, in addition to the text “opens clogged pipes”. See pictures of the products below. In the questionnaire, participants were informed that the products were not yet on the market and therefore looked a little unfinished.



Products used in experiment

4.3 Questionnaire and Measurements

The survey tool Qualtrics was used to set up the questionnaire and record the data. Qualtrics is a simple and useful tool that allows for data to be easily exported to statistical analysis programs such as SPSS (Saunders et al., 2016 p. 501). The questionnaire was presented in

Norwegian, as this is the native language for most of the participants. The questions are therefore translated for the purpose of further discussion. The original questionnaire can be found in Appendix A, and an overview of variables and explanations can be found in Appendix B. On the first page (Q1), participants read an informative text explaining that participation in the experiment was voluntary and completely anonymous (See Appendix A for full text). They had to indicate their consent to participate in the experiment by choosing “yes, I wish to participate” in order to continue. They also had the option of choosing “no, I do not wish to participate”, which would automatically end the survey.

After the consent page, participants were asked to indicate “which number is written on the wall in front of you” (Q2). This question was included to record whether participants were exposed to the mirror condition or not. The number 1 was placed on the mirror, representing the experimental condition, and the number 2 was placed on the back wall in the control condition. The number was strategically placed on the mirror so that participants’ attention would be lifted from the computer to the mirror. Participants then had to read another short text asking them to imagine that their pipes were clogged and that they needed to buy a new drain opener (Q3). They were instructed to consider the two products placed to the right of the computer and answer the following questions as truthfully as possible.

The first “real” question, labelled Q4 in the questionnaire, was constructed to measure product preference, which is the dependent variable in our research model. Product preference is a dichotomous variable, and participants were asked “which of the two products would you have bought if your pipes were clogged?”. They would then have to choose either “regular drain opener” or “drain opener with 100% natural ingredients”.

Question 5 was created to measure consensus estimates. The variable is measured by the perceived commonness of one’s own opinion. Participants were asked what percentage of others they believed would choose the same option as themselves. This measurement is adapted from Ross’ et al., (1977) original study on the false consensus effect and has been widely adopted for studies on false consensus. Participants had to write down “the percentage of the Norwegian population (1-100%) they believe would choose the same product as themselves”. Most previous studies on the false consensus effect have used the term ‘peers’ or referred to others that are often connected to the participants, for example by asking about ‘others at this university’. Considering theory on self-categorisation and social judgements, Marks and Miller (1987) argued that people’s tendency to compare themselves

with similar others influences their predictions about others. A broad term like the Norwegian population should nudge respondents into taking a broader perspective when making estimates.

Question 6 and 7 also measured dichotomous variables. They were measured by asking participants to choose either the 'regular' or '100% natural ingredients' drain opener. Question 6 measured people's moral beliefs by asking "which of the two products do you believe others **should** choose?". Question 7 was included to check people's beliefs regarding the effectiveness of the two drain openers. Participants were asked "which product do you believe is the most **effective**?"

Question 8 measured participant's environmental consciousness, which is the moderating variable in our proposed research model. Participants were asked to rate their level of agreement with six statements (See Appendix A). Statements were rated on a seven-point Likert scale (1 = strongly disagree and 7 = strongly agree), which is a well-established method for measuring people's views, attitudes and opinions (Likert, 1932). Environmental consciousness scores are constructed by calculating the mean average for participants' responses to six items. Four of the items were based on the environmental consciousness items used by Handeland and Skogholt (2018) and further developed with the help of researchers from NHH. Two additional items were included to measure private and social self, respectively.

Question 9 measured injunctive social norms. The items were based on Nigbur's et al. (2010) items for measuring injunctive social norms. Injunctive social norms are socially shared rules of conduct. They are based on the perception of what significant others believe is the right thing to do (Cialdini et al., 1991). In their study, Nigbur et al., (2010) use the term 'neighbours' as a representation for important others. However, for our study we found it more appropriate to use 'my friends and acquaintances' as a representation for important others. Injunctive social norms were measured using three items, where participants rated their agreement with the statements on a seven-point Likert scale (1 = strongly disagree and 7 = strongly agree).

Lastly, we also included two demographic variables, namely gender and age (Q10/Q11). They were included at the end of the survey in order to gather some information about our sample. When the questionnaire was completed, a short debrief message appeared, thanking

participants for their time and informing them that there are no immediate plans for launching the products on the market.

4.4 Procedure

As previously mentioned, the experiment was conducted at Vestkanten Storsenter in Bergen over the course of four weekdays. Two cubicles were set up for the participants to enter, and each cubicle had a curtain that made the space completely private. Inside each cubicle there was a table in standing height, a computer with the questionnaire, and the two products participants were asked to choose between. One of the cubicles also had a mirror that was hung directly behind the computer. The mirror was used to manipulate self-awareness in the experimental group. The setup was designed for participants to directly face the mirror when they entered the cubicle and while answering the questionnaire. A number was placed on the mirror or on the wall in order to distinguish between which group was exposed to the manipulation and which group was not. See pictures of the cubicles in Appendix A.2.

The two cubicles were set up by an entrance and there was a grocery store opposite to our stalls. This ensured a relatively steady access to potential participants. In addition to the cubicles, we also had a roll-up with the NHH logo and a sign that read “Help us with our master thesis and get a 70 NOK gift card. It only takes 5 minutes”. As people often do not want to stop and listen to what you have to say, the sign proved to be very effective in recruiting participants. All participants were given a brief explanation on how to navigate through the survey and told that they could touch the products, but not open them. When they finished, participants were thanked and given their gift card by one of the researchers.

4.5 Statistical Analysis

This chapter will account for the statistical methods applied in our analysis of the collected data and describe how we will address the proposed hypotheses. Data analysis is primarily conducted by the use of SPSS version 26. First, we briefly introduce what descriptive statistics we will use to explore our data set. Then, we discuss assumptions for conducting

the statistical analyses used to test the hypotheses. Lastly, we present which tests we will conduct to test our hypotheses.

4.5.1 Descriptive Statistics

To get an overview of our data set we will provide relevant descriptive statistics for our variables in Appendix C. In order to see whether the data may be summarized using a smaller set of factors, we will use an exploratory factor analysis with direct oblimin (Pallant, 2007, pp. 183-184). We will look for groupings among the intercorrelations of items to use further on in an analysis (Pallant, 2007, p. 179). A reliability analysis will be used in order to examine the Cronbach's alpha, and thus the reliability of the scales.

4.5.2 Assumptions

Independence of Observations

Independence of observations was ensured by having two separate cubicles for the two groups in the experiment. This way there was no interaction between participants in the control group and participants in the experimental group during the time they answered the questionnaire. People were only allowed to enter one at a time, which ensured that they only had themselves as reference when answering the questions.

Checking for Outliers

In order to run the statistical analyses we have planned for our research, we have to check for any outliers in our data set (LaerdStatistics, 2015). This is one of the assumptions for conducting an independent samples t-test, which will be used to test hypotheses 2a. In order to check that there are no significant outliers we will use the 'explore' option under descriptive statistics in SPSS and assess the boxplot generated from the procedure. Any data point that is more than 1.5 box-lengths from the edge is considered as outliers (Pallant, 2007 p. 63).

Testing for Normality

To test that the assumption of normal distribution is met, we first look at kurtosis and skewness values to assess the distribution of scores for the two groups. Considering we have a relatively large sample ($N = 210$) we will assess the Q-Q Plot in order to determine whether the assumption of normality is met (Pallant, 2007, p. 62).

Homogeneity of Variance

We will test the assumption of homogeneity of variance to ensure that the population variance for each group of the independent variable is the same (Pallant, 2007, p. 204). The sample size is relatively equal for the two groups of our independent variable, control group ($n = 100$) and experimental group ($n = 110$). Levene's test of equality of variances will be used to test this assumption. SPSS produces this test when conducting an independent samples t-test and we will look for $p > .05$. If this assumption is not met, SPSS provides an alternative t-value that can be used in further analysis (Pallant, 2007, p. 234).

4.5.3 Moderation Analysis: Self-Attention and Choice

To test our first hypothesis, we will conduct a logistic regression analysis using PROCESS Model 1 (Hayes, 2013). The aim is to uncover whether increased self-attention (X) increases the likelihood of choosing the sustainable product (Y) when having a high score on the environmental consciousness scale (W). Because our moderator (W) is a continuous variable we will use the Johnson-Neyman technique to test the direction of the interaction. This will allow us to derive values along the continuum of M to see where the conditional effect of self-attention is significant and where it is not (Hayes, 2012). These values identify the boundary or boundaries of regions of significance (Hayes, 2012). In our analysis, we will look at the value(s) of environmental consciousness where the interaction with self-attention is significant, and the direction of the interaction on product preference. An advantage of using this approach is that we do not have to decide what is considered low, moderate or high values in reference to the moderator prior to conducting the analysis (Hayes, 2012).

4.5.4 Between-Group Analysis: Self-Attention and Consensus

To test our second hypothesis, we will use an Independent samples t-test to determine whether there is a difference between mean consensus estimates in our control group and our experimental group. More specifically, the test will determine whether the difference is statistically significant (Pallant, 2017, pp. 233-236). For our hypothesis to be correct we would have to see an increase in mean consensus estimates in the experimental group compared with the control group, and $p < .05$. To assess the magnitude of the difference between the two groups we will calculate the effect size using eta squared and Cohen's d (Pallant, 2007, pp. 235-236). This will allow us to ascertain the importance of the self-attention variable (LaerdStatistics, 2015).

To test hypothesis 2b we will first check whether there is a false consensus effect present in participant's estimates using the procedure developed by Ross et al. (1977). Then, we will use a one-sample t-test to test to check for true false consensus. We will construct two new variables; consensus estimates if choice equals green-, and consensus estimates if choice equals regular product preference. Then we will test whether participants have overestimated consensus for their own choice compared to how many people actually chose the respective products. We will look at the size of the mean difference and whether it is significant.

4.5.5 Chi-Square Test for Independence: Self-Attention and Moral Beliefs

The third hypothesis suggests a relationship between two categorical variables. Therefore, we will use a chi-square test for independence to test H_3 . The test portrays observed frequencies of cases in each category, as well as the expected values if there was no relationship between the variables under examination (Pallant, 2007, p. 214). In order to perform the test, we will compute a variable indicating if participants think that others *should* choose the same product as themselves. We will look for a significance value of $p < .05$ to conclude whether our prediction is correct. Because we get a 2x2 table we will use phi coefficient to assess the effect size, as suggested by Pallant (2007, pp. 216-218).

4.5.6 Additional Variables

We included a measure for perceived effectiveness because this study is part of a larger research project where perceived effectiveness of sustainable products is of interest. We also included a measure for social norms, because research has found that they are relevant for understanding and predicting behaviour. We will use a chi-square test for independence to check whether perceived effectiveness is related to the dependent variables. Then, Pearson's product-moment coefficient will be used to determine the strength and direction of a relationship between social norms and the dependent variables (LaerdStatistics, 2018). Pearson's correlation coefficient takes on values between -1 and +1 (Pallant, 2007, p. 126). The number indicates whether there is a positive or negative relationship between the two variables (Pallant, 2007, p.126).

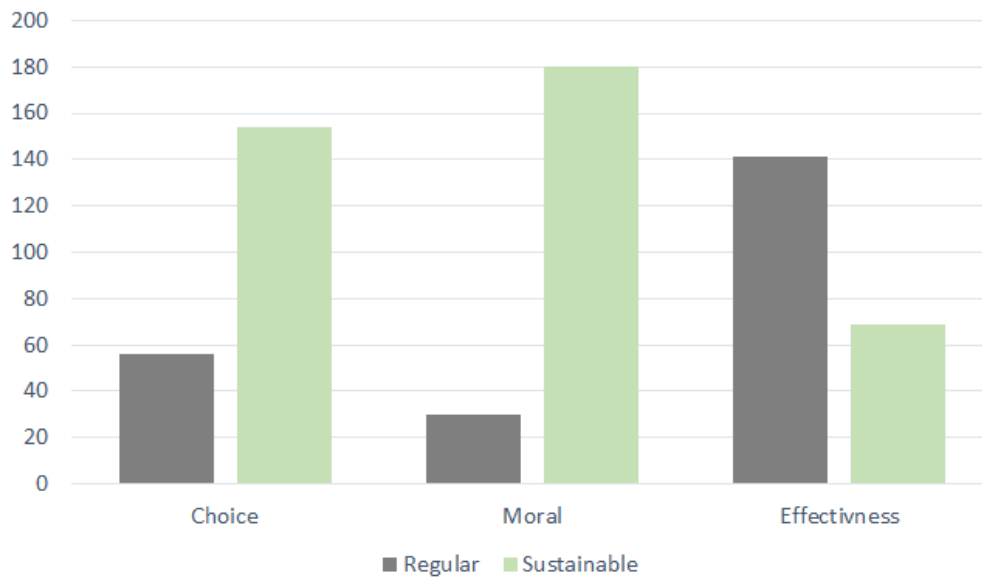
5. Results

In this chapter, we will present the results from our research. For the purpose of analysing data from our experiment, the data set needed to be recoded. Q2, referencing which cubicle the participants were in, was initially 1 = mirror, and 2 = control group, and was recoded into 1 = control, and 2 = mirror. The dichotomous variables were all recoded to 1 = ‘regular drain opener’ and 2 = ‘drain opener with 100% natural ingredients’. This was done to simplify outputs and allow for easier interpretation of results.

5.1 Descriptive Statistics

Descriptive statistics for all variables can be found in Appendix C. The distribution of mean environmental consciousness scores shows that respondents who chose the green product, in general had higher scores ($M = 4.91$, $SD = 1.16$) than respondents who chose the regular product ($M = 3.98$, $SD = 1.18$; $p < .0005$). Table 5.1 shows the frequency of answers for product choice, moral judgements and perceived effectiveness for both self-aware respondents and the control group. We observe that a majority of respondents chose the sustainable product (regular: $n = 56$, sustainable: $n = 154$, $p < .0005$). When asked what others *should* choose (‘moral’), there is also an uneven distribution between respondents who chose the sustainable and the regular product (regular: $n = 30$, sustainable: $n = 180$, $p < .0005$). When asked which product the respondents believe to be most effective, the tendency reverses, and we see that the majority of respondents chose the regular drain opener (regular: $n = 141$, sustainable: $n = 69$, $p < .0005$). We will discuss this tendency further in chapter 6. An overview of other relevant descriptive statistics can be found in Appendix C.

Table 5.1: Frequencies of variables: choice, moral and effectiveness



Factor Analysis and Reliability of Scale

A factor analysis was applied using direct oblimin with Kaiser Normalization. The factor analysis reveals that environmental consciousness items load on the same component, whereas injunctive social norm items load on another component (see Appendix D). This indicates high internal validity of our study because the two measurements are indeed measuring two different constructs. Even though all environmental consciousness items load on the same factor, the factor loading for the item regarding recycling is lower than the other items (just above .4). The other components load stronger than recycling (.724 to .836). This finding suggests a reconsideration of the inclusion of the recycling item under environmental consciousness. For the environmental consciousness items comprising component 1, Cronbach's alpha is .834, which is above the acceptable value of .7 (Pallant, 2007, p. 95). If the recycling item is deleted from the scale, we have a Cronbach's alpha of .838. Therefore, we remove the recycling item from the scale in further analysis. For the social norms items of component 2, Cronbach's alpha is .731, which is above the acceptable value. According to Pallant (2007, p. 95), achieving a satisfactory Cronbach's alpha value can be difficult for scales with a small number of items. Considering we only have 3 items for measuring social norms, .731 is a satisfactory value.

5.2 Assumptions

Testing for Normality

Testing for normality for the dependent variable 'consensus', the Kolmogorov-Smirnov statistic shows a significant result ($p < .05$), indicating a violation of the assumption of normality. However, this is relatively common for large samples (Pallant, 2007, p. 62). When looking at skewness and kurtosis for consensus estimates, we find normal distribution in the control group, with skewness of $-.263$ ($SE = .241$) and kurtosis of $-.318$ ($SE = .478$), and in the mirror group with skewness of $-.299$ ($SE = .230$) and kurtosis of $-.504$ ($SE = .457$). The Normal Q-Q plot also confirm that there are no outliers for consensus estimates.

Checking for Outliers

There were no outliers found for dependent variables, as assessed by looking at the boxplots. Therefore, we did not be exclude any respondents from our data.

5.3 Moderation Analysis: Self-Attention and Choice

A logistic regression analysis in PROCESS Model 1 (Hayes, 2013) was carried out to test H_1 : *High self-attention increases (decreases) preference for sustainable products among environmentally conscious (non-conscious) consumers*. Self-attention (mirror or no mirror) is the predictor, product preference (sustainable or regular product) is the dependent variable, and environmental consciousness is the moderator.

The interaction between self-attention and environmental consciousness on product preference is significant ($\beta = -.777, p = .0227$). However, probing the interaction shows that the direction is opposite of what was predicted. Self-attention has a negative effect on product preference when subjects score high on environmental consciousness ($p < 0.5$), see Figure 5.1 below. The Johnson-Neyman significance region shows that the effect of mirror on choice becomes significant for environmental consciousness scores from 4.7238 ($p = .05$) and up. For these values the effect is negative. We also read from the Johnson-Neyman

output that the effect changes from positive to negative at the value of 3.64 for environmental consciousness. That means the effect of self-attention on product preference is dependent on whether the subject scores high on environmental consciousness. However, the effect is opposite to what we had predicted. The higher subjects score on environmental consciousness, the more negatively they are impacted by self-attention, and increasingly prefer the regular product. Consequently, H_1 cannot be confirmed. We will discuss this further in chapter 6 and provide some alternative explanations for the effect of self-attention.

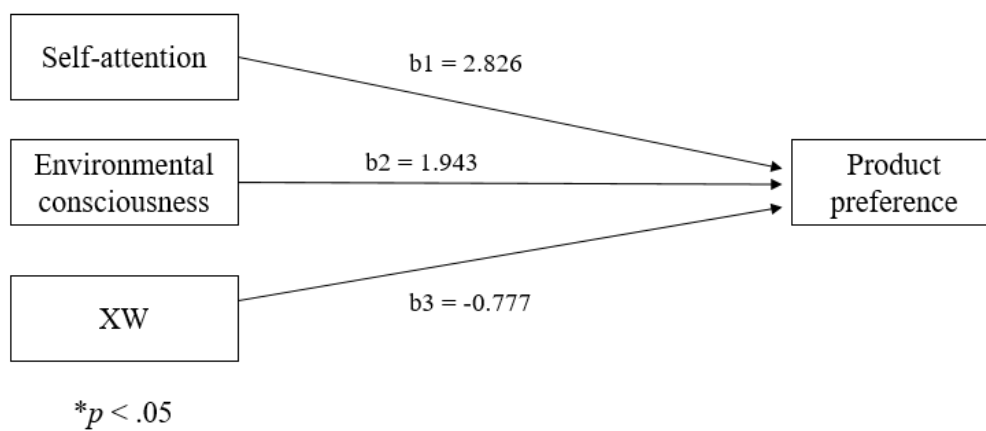


Figure 5.1. Simple Moderation Model: Effect of self-attention on product preference

5.4 Between-Group Analysis: Self-Attention and Consensus

In order to test hypothesis 2a we used an Independent Samples T-Test. The prediction is that “When self-attention is high, respondents are more likely to give higher consensus estimates for their own product preference”. Self-attention is our independent variable and consensus estimate is our dependent variable. There is no significant difference in scores for the control group ($n = 100$, $M = 62.98$, $SD = 21.36$) and the experimental group ($n = 110$, $M = 61.79$, $SD = 21.40$). Levene’s test for equality of variances is non-significant ($p = .835$), which means we do not violate the assumption of equal variance (Pallant, 2007, p. 204). The t-test shows $t(208) = .403$, $p = .688$ (two-tailed). The magnitude of the differences in means (mean difference = 1.189, 95% CI: - 4.63 to 7.01) is very small (eta squared = .001). Thus, we

conclude that there is no statistically significant difference between high and low self-awareness on consensus estimates. Consequently, H_{2a} cannot be confirmed. The finding is further discussed in chapter 6.

5.5 False Consensus Effect

Although increased self-attention did not lead to higher consensus estimates, hypothesis 2b looks at whether “Consumers who choose the regular product overestimate the commonness of their own opinion to a larger degree than consumers who choose the sustainable product, thereby demonstrating true false consensus”. First, an Independent Samples T-Test was applied to test whether there is a difference in consensus estimates between participants who chose the regular option vs. the sustainable option, across the two conditions. Group statistics show that 56 respondents chose the regular product. These respondents have a mean consensus estimate of 49.95% ($M = 49.95$, $SD = 21.24$). Respondents who chose the sustainable product ($n = 154$) have a mean consensus estimate of 66.87% ($M = 66.87$, $SD = 19.57$). There is a significant difference between consensus estimates for those who chose the sustainable product and for those who chose the regular option: $t(208) = -5.417$, $p < .0005$ (two-tailed). The magnitude of the differences in the means (mean difference = -16.924 , 95% CI: -23.1 to -10.8) is large (eta squared = $.124$). However, this initial test does not reveal whether there is a *false* consensus effect present. Therefore, we split the file and organize the data by groups; *mirror condition* and *control*. We compared means scores to find the difference in consensus estimates between respondents who chose the regular vs. the sustainable product.

In the mirror condition, respondents who chose the regular product ($n = 31$) have a mean consensus estimate of 49.90% ($M = 49.90$, $SD = 22.19$). Respondents who chose the sustainable product option ($n = 79$) have a mean consensus estimate of 66.46% ($M = 66.46$, $SD = 19.30$). In the control group, respondents who chose the regular product ($n = 25$) have a mean consensus estimate of 50.00% ($M = 50.00$, $SD = 20.46$). Respondents who chose the sustainable product ($n = 75$) have a mean consensus estimate of 67.31% ($M = 67.31$, $SD = 19.96$).

The standard test for measuring false consensus effect was established by Ross et al. (1977). False consensus is measured by comparing the estimates provided by the participants who chose the sustainable product, for how many others would choose as them, with the estimates provided by those who chose the regular product, for how many others would choose the sustainable product. We observe an overestimation of the commonness of one's own opinion of 16.36% in the mirror condition and an overestimation of 17.31% in the control condition (see table 5.2 for overview). Consequently, we can establish the presence of a false consensus effect.

Table 5.2: Estimated Commonness of Own and Alternative Product Choice, Ross' et al. (1977)

Condition	Rater's choice	n	Consensus estimates		FCE
			Regular	Sustainable	
Mirror	Regular	31	49,9	50,1	16,36
	Sustainable	79	33,54	66,46	
Control	Regular	25	50	50	17,31
	Sustainable	75	32,69	67,31	

Note: FCE = False Consensus Estimates

Ross et al. (1977) compare consensus estimates for people who chose one product with the consensus estimates of those who did not. True false consensus compares the mean estimates of people who chose a product with how many actually chose this product. A majority of participants chose the sustainable product (73.3%) and a minority of participants chose the regular product (27.7%). A one sample t-test was run for the majority group and minority group respectively. Results for the majority group demonstrated $M = 66.87$, $SD = 19.57$; $t(153) = -4.078$, $p < .0005$ (two tailed), with mean difference (-6.43, 95% CI: -9.55 to -3.32). For the minority group we found $M = 49.94$, $SD = 21.24$; $t(55) = 8.200$, $p < .0005$ (two tailed) and mean difference (23.3, 95% CI: 17.65 to 28.94). True false consensus suggests that participants who chose the regular product significantly overestimated (23.5%) how many others would also choose the regular product, while participants who chose the

sustainable product significantly underestimated (-6.43%) consensus for their preference. H_{2b} is therefore supported.

5.6 Chi-Square Test for Independence: Self-Attention and Moral Beliefs

We performed a chi-square test in order to test H_3 : *self-attention increases consumers' moral beliefs that others should choose the same product as themselves*. We composed a new variable, labelled 'equal', to indicate whether the choice made by respondents regarding what they believe others *should* choose, is the same as what they themselves chose. In the control group, 85% of respondents chose the same alternative for what others *should* choose as they chose for themselves and only 15% believed others choose differently to themselves. In the mirror condition, 82.7% believed others *should* choose the same alternative as themselves, whereas 17.3% believed others *should* choose the other alternative. Crosstabulation of choices is shown in table 5.3. The assumption of expected cell count > 5 is not violated. The Chi-square test for independence (with Yates Continuity Correction) indicates no significant association between self-attention and the moral belief that others *should* choose the same alternative, $X^2(1, n = 210) = .067, p = .796, \phi = .031$. Consequently, there is no support for H_3 .

Table 5.3: Crosstabulation of Self-Attention and Same Choice for Self and Others

Condition	Choice	
	Equal	Not Equal
Control	85 85 %	15 15 %
Mirror	91 82,7 %	19 17,3 %
Total	176 83,8 %	34 16,2 %

5.7 Additional Variables

In order to test whether there is a relationship between product choice and perceived product effectiveness, and between moral judgements and perceived product effectiveness, we used a chi-square test for independence. Among the respondents who chose the regular drain opener for themselves, 92.9% believed that the regular product would be the most effective and only 7.1% thought that the sustainable option would be more effective. Out of the of respondents who chose the sustainable product, 57.8% believed the regular drain opener would be more effective, whereas 42.2% believed that the sustainable option would be the most effective. The Chi-square test for independence (with Yates Continuity Correction) indicates a significant association between choice and perceived effectiveness, $X^2(1, n = 210) = 21.326$, $p < .0005$, $\phi = .33$. The effect is considered medium using Cohen's (1988) criteria. This indicates that there is a relationship between choice and perceived effectiveness.

When asked what others *should* choose (i.e. moral judgements), 96.7% of those who answered regular, also believed it to be the most effective product, whereas only 3.3% believed the sustainable product to be the most effective. Among those who thought others *should* choose the sustainable product, 62.2% believed the regular product was the most effective, whereas 37.8% thought the sustainable option would be the most effective. The Chi-test for independence (with Yates Continuity Correction) indicates a significant association between moral judgements and perceived effectiveness, $X^2(1, n = 210) = 12.312$, $p < .0005$, $\phi = .257$. The effect size is considered small to medium, using Cohen's (1988) criteria. This indicates that there is a relationship between moral judgements and perceived effectiveness.

Table 5.4: Crosstabulation of Dependent Variables and Perceived Effectiveness

		Effectiveness	
		Regular	Sustainable
Choice	Regular	52 92,9 %	4 7,1 %
	Sustainable	89 57,8 %	65 42,2 %
Total		141 67,1 %	69 32,9 %
Moral	Regular	29 96,7 %	1 3,3 %
	Sustainable	112 62,2 %	68 37,8 %
Total		141 67,1 %	69 32,9 %

To test for association between perceived effectiveness and the last dependent variable, ‘consensus’, we used Pearson’s product-moment coefficient. Based on the results, consensus estimates are related to perceived effectiveness ($r = .337, p < .0005$, two-tailed).

We used Pearson’s product-moment coefficient to test whether there is a correlation between social norms the dependent variables. The results are presented in the table below. Social norms are not significantly correlated with any of the three dependent variables.

Table 5.5: Pearson’s Correlation between Social Norms and Dependent Variables

DV	Social Norms
Choice	.068
Consensus	.087
Moral	-0,05

**Correlation is significant at the 0.01 level (two-tailed)
*Correlation is significant at the 0.05 level (two-tailed)

Additionally, we also used Pearson's correlation to check for a relationship between environmental consciousness and the three dependent variables. As seen in Table 5.6, environmental consciousness is significantly correlated with all three dependent variables. The relationship is positive, but the correlation is relatively weak.

Table 5.6: Pearson's Correlation between Environmental Consciousness and Dependent Variables

DV	Environmental consciousness
Choice	.327**
Consensus	.172*
Moral	.184**

**Correlation is significant at the 0.01 level (two-tailed)

*Correlation is significant at the 0.05 level (two-tailed)

5.8 Additional Findings

5.8.1 Effect of Self-Attention on Environmental Consciousness and Social Norms

A possible weakness with our research design is that the mirror manipulation was present throughout the questionnaire, and consequently, responses for all variables were collected while participants were exposed to the manipulation. Therefore, there is a possibility of the manipulation affecting the respondents' responses. To test whether this was the case for any of the environmental consciousness and social norm items, we performed an Independent samples t-test. There is no statistically significant difference between the control and experimental group for 'important', 'guilt', 'personal self' or 'social self' (see Table E.1 in Appendix E). However, for the 'boycott' item there is a statistically significant difference between the control group ($M = 4.02$, $SD = 1.84$) and the mirror condition ($M = 4.59$, $SD = 1.74$; $t(208) = -2.31$, $p = .022$). Implications for an effect of the manipulation on the moderator will be further discussed in chapter 7 under limitations. There was no effect of self-attention on any of the social norm items (See Table E.2 in Appendix E). We also ran

two independent sample t-tests for the comprised measurements individually. The effect of self-attention on the environmental consciousness measurement was non-significant ($p = .135$). Naturally, there was also no effect of self-attention on the social norms measurement ($p = .517$).

While assessing the effect of self-attention on these two variables we wondered whether environmental consciousness and social norms were correlated with each other. To test for a correlation between the two we used Spearman rho procedure to test the strength and direction of the relationship. We found that environmental consciousness and injunctive social norms have a positive weak correlation ($\rho = .353, n = 210, p < .0005$).

5.8.2 Chi-Square Test for Independence: Choice and Moral Judgement

We found no support for H_3 and consequently no significant association between self-attention and the moral belief that others *should* choose the same alternative as oneself. However, this test does not separate those who chose the regular alternative from those who chose the sustainable product. In order to get a better understanding of which respondents chose what alternatives, another chi-square test was run to see whether there is an association between product choice and moral judgements. Across the two conditions ('mirror' and 'control'), 46.4% of those who chose the regular product, answered that others should also choose the regular alternative, whereas 53.6% reported that others *should* choose the sustainable product option. Among the respondents who chose the sustainable product, 2.6% reported that others *should* choose the regular product, whereas 97.4% said others should also choose the sustainable alternative. The Chi-square test for independence (with Yates Continuity Correction) indicates a significant association between a respondent's choice and the choice they believe others should make, $\chi^2(1, n = 210) = 60.902, p < .0005, \phi = .554$. The effect size is considered large using Cohen's (1988) criteria.

5.8.3 Moderation Analysis for Regular Product Preference

Increased self-attention did not affect participants' consensus estimates. However, we did find results indicating that participants who chose the regular product overestimated the

commonness of their choice to a higher extent than people who chose the sustainable option. We found this tendency interesting and wondered whether people who had a high environmental consciousness score, but chose the regular option, estimated that others would choose the same them. Therefore, we found reason to explore this further by running another logistic regression in PROCESS. First, we instructed SPSS to select cases if choice = 1 (regular product was chosen), which provided a sample size of $n = 56$. The model shows the interaction between self-attention and environmental consciousness on consensus estimates when regular product is chosen. The model interaction is non-significant ($\beta = 6.27, p = .25$). From the Johnson-Neyman output we see that the interaction becomes positive from environmental consciousness score 4.3 and up, though statistically non-significant ($p = .95$). Therefore, we emphasize that no conclusions can be drawn from these results. Nonetheless, the test demonstrates an interesting tendency, namely that self-attention has a positive effect on consensus for respondents who score high on environmental consciousness but choose the regular product.

5.8.4 Simple Mediation Analysis: Effect of Social Norms on Product Preference through Environmental Consciousness

Several studies have found personal norms to be a mediator in the relationship between injunctive social norms and behavioural intentions (e. g. Doran & Larsen, 2016; Thøgersen, 2009). This mediated relationship was not hypothesised prior to conducting our study, and we recognize that in our study, product choice (dependent variable) was measured prior to injunctive social norms, which is problematic for testing this relationship. We found a weak correlation between social norms and environmental consciousness (see 5.8.1). Therefore, we wanted to see whether we could detect a similar finding to Doran and Larsen (2016) from our data, using environmental consciousness as a mediator in the relationship between injunctive social norms and product preference. To test this, we conducted a mediation analysis using Model 4 in PROCESS (Hayes, 2013).

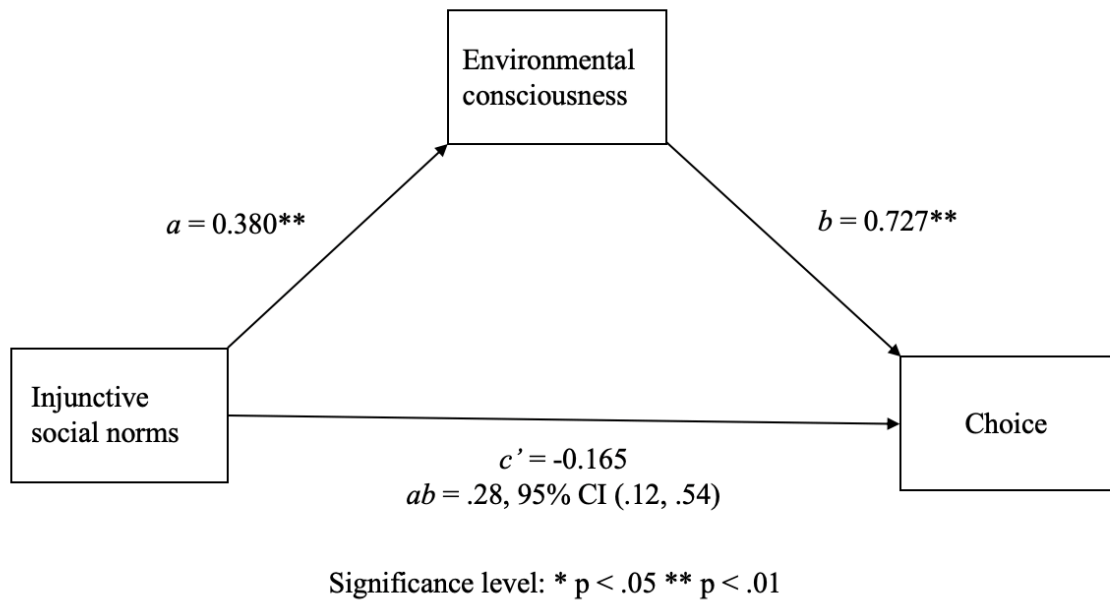


Figure 5.2: Simple Mediation Model: Environmental Consciousness as a Mediator between Injunctive Social Norms and Choice

We see that injunctive social norms significantly predicts environmental consciousness ($a = .38, t(208) = 5.36, p < .0005$). The relationship is positive: as injunctive social norms scores increase, so does environmental consciousness. There is no support for the direct effect ($c' = -.16, Z = -.99, p = .32$). Hence, injunctive social norms are not a significant predictor of choice. Environmental consciousness does, however, significantly predict choice ($b = .73, Z = 4.34, p < .0005$). There is a significant indirect effect of injunctive social norms on product choice through environmental consciousness (effect = .28, 95% BootCI (.12, .54)), supporting the suggestion that environmental consciousness is a mediator between injunctive social norms and choice in this conceptual model. However, the relationship needs to be tested experimentally in order for conclusions to be drawn.

5.8.5 Gender and Preferences

We found it interesting to check whether gender was related to product preference, moral judgements and perceived effectiveness. Our results show that women were more inclined to choose the sustainable product (84%) compared to men (58.9%). A Chi-square test for

independence (with Yates Continuity Correction) indicated a significant association between gender and product preference, $X^2(1, n = 209^2) = 15.261, p < .0005, \phi = -.281$. This is considered a small effect, using Cohen's (1988) criteria. For moral judgements, 96.6% of females believed others *should* choose the sustainable product, whereas 71.1% of males believe the same. A Chi-square test for independence (with Yates Continuity Correction) indicated a significant association between gender and moral judgements, $X^2(1, n = 209) = 25.126, p < .0005, \phi = -.361$. This is considered a medium effect, using Cohen's (1988) criteria. Women were also more inclined to believing that the sustainable product would be the most effective (38.7% vs. 25.6%). A Chi-square test for independence (with Yates Continuity Correction) indicated a significant association between gender and perceived effectiveness, $X^2(1, n = 209) = 3.406, p < .05, \phi = -.138$. This effect is considered small, using Cohen's (1988) criteria.

Because gender was significantly related to choice, we wanted to check if self-attention had a different effect on women's and men's choices, respectively. Therefore, we ran two new moderation analyses using PROCESS Model 1 (Hayes, 2013) where self-attention is the predictor, environmental consciousness is the moderator, and choice is the dependent variable. For women we find a non-significant negative interaction ($\beta = -0.482, p = .357$). For men, the interaction is also negative, but significant ($\beta = -1.082, p < .05$).

² One respondent did not wish to declare their gender. This response was excluded for the purpose of gender preference analyses only.

6. Summary of Results and Discussion

In the following chapter, we will summarise the results of our data analysis, and provide a discussion on reasons and possible explanations for the results. The purpose of this study was to investigate whether increased self-attention has an effect on sustainable choices and if self-attention has an effect on the perceived commonness of one's own opinion. The discussion will follow the natural order of the hypotheses in Table 6.1.

Hypothesis	Result
H ₁ : High self-attention increases (decreases) preferences for sustainable products among environmentally conscious (non-conscious) consumers	Not supported
H _{2a} : When self-attention is high, respondents are more likely to give higher consensus estimates for their own product preference	Not supported
H _{2b} : Consumers who choose the regular product overestimate the commonness of their own opinion to a larger degree than consumers who choose the sustainable product, thereby demonstrating true false consensus	Supported
H ₃ : Self-attention increases consumers' moral beliefs that others should choose the same product as themselves	Not supported

Table 6.1: Summary of Hypotheses and Results

6.1 Discussion of Results

6.1.1 Moderation Analysis: Self-Attention and Choice

We conducted a logistic regression analysis using PROCESS Model 1 (Hayes, 2013) to test the effect of self-attention on product preference moderated by environmental consciousness. The test showed a significant interaction between self-attention and environmental consciousness on product preference. Self-attention has a significant negative effect when environmental consciousness scores are high, and a non-significant positive effect for the

sustainable product when environmental scores are on the lower end. The higher respondents scored on environmental consciousness, the more likely they were to choose the regular drain opener when self-attention was high. Consequently, we find no support for H₁. This finding is interesting because it demonstrates an opposite effect to what we predicted. The results also contradict the findings in Handeland and Skogholt's (2018) study, which suggests that the effect of self-attention on choice needs further investigation. The main difference between the study of Handeland and Skogholt (2018) and the current study is the type of measurements. Handeland and Skogholt (2018) measured the likelihood of the respondent choosing the three drain openers (100% natural ingredients, 100% recycled packaging and regular) on a 7-point Likert scale. The present study differs by employing a dichotomous variable for choice. The likelihood scale facilitates more nuanced responses, whereas the nature of the outcome variable in this study "forces" the respondent into choosing one of two alternative choices. Additionally, the items measuring environmental consciousness are not identical across the two studies, though overlapping. These two differences may explain the contradicting findings of the two studies.

Although high self-attention did have a main effect on product preference, it did not have an effect for either hypothesis 2a or 3. We therefore question whether the mirror manipulation is sufficient for inducing high self-awareness. A survey of 1000 British individuals revealed that men look at their reflection 23 times a day while the average for women was 16 times (Long, 2019). Another survey found that women spend 43 minutes looking at their own reflection every day, while men spend 56 minutes (Long, 2019). Therefore, we propose that perhaps people are too used to seeing their own reflection and that additional exercises are needed to truly increase self-attention. We also find alternative theoretical grounding for the tendencies we see in our results, which are presented in the general discussion.

6.1.2 Between-Group Analysis: Self-Attention and Consensus

We did not find support for the effect of self-attention on increased consensus estimates, and the results showed no significant difference between the experimental group and the control group. Surprisingly, the results indicated a minimal tendency in the opposite direction to what was predicted, showing slightly higher mean consensus estimates in the control group compared to the experimental groups. However, the interaction was non-significant. It was

hypothesised that increased self-attention would make personal norms in regard to sustainability more salient when faced with the choice of either buying a regular product or a sustainable product. It was argued that when one's own opinion becomes more salient it would increase people's beliefs about the commonness of this preference, but the results suggest this is not the case.

We did find support for a false consensus effect in participants' estimates of how many would agree with their own preferred choice. Using Ross' et al., (1977) standard test for false consensus, results suggested that participants did in fact overestimate how many would choose the same option as themselves. Furthermore, we also found support for the prediction that a larger true false consensus effect would be found for people who chose the regular product than for those who chose the sustainable product. In fact, participants who chose the regular product significantly overestimated how many would choose the regular product and participants who chose the sustainable product significantly underestimated how many would choose the sustainable product. This finding is interesting because it indicates motivational mechanisms for explaining the false consensus effect. People who are in the minority group overestimate the commonness of their opinion to a higher degree than people in the majority group, when compared to the actual number of people who chose the respective products.

6.1.3 Chi-Square Test for Independence: Self-Attention and Moral Beliefs

In order to test whether the moral judgement made by respondents regarding what other people *should* choose corresponded with what they themselves chose, we composed a new variable ('equal'). The chi-square test ran on self-attention and 'equal' revealed no significant association between self-attention and the moral belief that others *should* choose the same product option as themselves. Consequently, we found no support for H₃. Self-attention had no impact on the percentage of respondents who believed others *should* choose the same alternative as them. Although self-attention is not proven to make a difference for moral judgements, it is still an interesting tendency that the majority of respondents believe that others *should* choose the same alternative as them, regardless of category. Among the participants who chose the sustainable product, a majority believed others *should* choose the

sustainable option. However, among the participants who chose the regular product a minority believed others *should* choose the regular option. Regardless, a considerable number of responders affirm their choice of the regular product by projecting it onto others.

With the vast amount of information consumers are subject to today, one could argue that respondents would indicate that others *should* choose the sustainable option for moral reasons, even though they themselves have chosen the regular product option. It is human nature to adhere to norms, and to reduce discrepancies between own behaviour and normative behaviour. Our results indicate a desire for respondents to normalize own behaviour and to juxtapose own choices with the choices of others, possibly to minimize threat to the self.

6.1.4 Additional Variables

We wanted to test whether effectiveness was associated with the choice each respondent made, as well as their moral belief that others *should* choose the same as them. The chi-square tests showed a significant relationship between choice and the product respondents believed to be the most effective, and a significant association between moral and perceived effectiveness. Consensus estimates were also significantly associated with perceived effectiveness.

Overall, the majority of respondents indicated that they believed the regular product would be the most effective. Nearly all of the respondents who chose the regular product believed it to also be the most effective out of the two options, whereas just over half of the respondents who chose the sustainable option believed the regular drain opener to be the most effective. This suggests that respondents who chose the regular product affirm their choice with perceived effectiveness of their choice, whereas those who chose the sustainable product might not base their choice as much on perceived effectiveness. This may be a case of respondents engaging in motivated-, and not objective, reasoning to make their choices. It is more likely that people will arrive at conclusions they wish to arrive at, due to a biased set of cognitive processes controlling reasoning (Kunda, 1990). The consumers who chose the regular product are more motivated than the ones who chose the sustainable product, to justify their choice by indicating that it is the most effective product. Similarly, the respondents who chose the sustainable product may be motivated to arrive at the conclusion

that the sustainable product is more effective, even though this might not be objectively correct. It is possible that the two groups of respondents can be divided into two categories of motivated reasoning: those wanting to answer “correctly”, and those wanting to arrive at a specific conclusion (Kunda, 1990), and make their choices accordingly. The majority are inclined to maintain consistency in their answers. The product design does not disclose information about effectiveness, so it is a fair assumption that respondents base their opinions of effectiveness on past experiences or preconceived notions.

Social norms were not found to be significantly correlated with any of the three dependent variables. This suggests that social norms alone are not a sufficient indicator of choice in this research. This is consistent with previous research on injunctive social norms (Doran & Larsen, 2016; Nigbur et al., 2010). For environmental consciousness on the other hand, we found a significant positive correlation. However, we note that the correlation is not strong. This result signifies the importance of personal norms for choices we make for ourselves, as well as inferences we make about others.

6.1.5 Additional Findings

Effect of Self-Attention on Environmental Consciousness and Social Norms

A limitation of our research design is that environmental consciousness scores are recorded while participants are exposed to the manipulation. Due to the possibility of demand effects on the outcome variables, we measured environmental consciousness after the outcome variables. This was also the case for social norms. It would have been better if respondents were exposed to the manipulation only when answering questions measuring the dependent variables. However, we found no natural way to remove the mirror during the experiment without this having an effect on participants and their responses. No significant difference was found between the control- and experimental groups for all but one of the items. For the ‘boycott’ item there was a statistically significant difference in mean scores between the two conditions. Respondents in the mirror group had a higher mean score for willingness to boycott than respondents in the control group, suggesting that the mirror might have had an unintended effect on the moderator. It can be argued that the item should have been excluded from the analysis. However, the environmental consciousness measurement as a whole was

not significantly different between control and experimental group. Social norms was also not significantly affected by the manipulation.

Moderation Analysis for Regular Product Preference

Our findings indicated that respondents who chose the regular product option, across the two categories, overestimated the commonness of their own choice to a larger extent than the ones who chose the sustainable option. We found this interesting, and consequently decided to explore this further. We tested whether respondents who had high environmental consciousness scores, but chose the regular product option, estimated that others would do the same. The result of the interaction between self-attention and environmental consciousness scores on consensus estimates when regular product is chosen was not significant. Therefore, no conclusions can be drawn from this finding. However, we did see a tendency of self-attention having a positive effect on consensus estimates for respondents with high environmental consciousness scores who chose the regular product option. The tendency is interesting in relation to the argument for motivational mechanisms for false consensus.

Simple Mediation Analysis: Effect of Social Norms on Product Preference through Environmental Consciousness

We wanted to see whether we could replicate the findings from previous research, where environmental consciousness is found to be a mediator in the relationship between injunctive social norms and behavioural intentions (Doran & Larsen, 2016). A mediation analysis suggested that injunctive social norms significantly predicts environmental consciousness, and that the relationship is positive. Environmental consciousness scores significantly predict choice, but there was no significant direct effect of social norms on choice. The indirect effect of injunctive social norms on product choice through environmental consciousness was significant, supporting previous research and indicating that environmental consciousness is a mediator between injunctive social norms and behaviour. These findings would have to be tested experimentally in order to be more than a mere indication of social norms needing to be internalised in order to predict behaviour.

Gender and Preferences

Our results showed that women were more inclined than men to choose the sustainable product for own choice, moral judgements and perceived effectiveness (see Table C.9, C.10 and C.11 in Appendix C). The association between gender and all three variables was significant. The moderation analysis showed that self-attention had a negative effect on both women and men, although the interaction was only significant for men. This supports the negative effect of self-attention that was found when testing H₁. Because this study is not primarily concerned with the role of gender in sustainable product preferences, we did not pursue this tendency further than what is described in our results section. More research on this topic is suggested.

6.1.6 Descriptive Statistics

From descriptive statistics we see that environmental consciousness scores tend to be higher for people who chose the sustainable product (See Appendix C). This finding affirms our first assumption about green identity. Namely, that ‘green’ values and norms are, to a larger degree, reflected in the identities of people who opt for ‘green’ products, than for those who do not.

The frequency table (Table 5.1), indicates a willingness, be it perceived, to purchase sustainable products, as well as a moral conviction that others *should* choose the sustainable option. Yet, when measuring perceived effectiveness, we observe that the majority of the respondents believed the regular drain opener to be more effective than the one with 100% natural ingredients. Lin and Chang (2012) find this phenomenon in their research on the role of environmental consciousness in green product usage. Consumers generally view environmentally friendly or sustainable products as less effective than their regular counterparts and consequently use a larger amount of the sustainable product to make up for this believed lack of effectiveness (Lin & Chang, 2012). Such behaviour is found to be especially prominent in consumers who are environmentally friendly (Lin & Chang, 2012). This research could help explain the discrepancy between product choice and the product believed to be the most effective. As mentioned, the percentage of respondents who believed the regular product was the most effective is large, suggesting that the respondents in our sample rely on their compensatory inferences to decide their stance on the most effective

product, as observed in the studies of Lin and Chang (2012). Their findings can also help explain why respondents who choose the sustainable product also view it as less effective.

6.2 General Discussion

The purpose of this research project was to explore how self-attention influences consumers' choices when faced with sustainable products. We composed two research questions to guide our research:

RQ1: How does increased self-attention affect preference for sustainable products?

RQ2: Does self-attention have an effect on the perceived commonness of one's own opinion?

Our research was based on results from Handeland and Skogholt's (2018) master thesis, which indicated that self-attention had an effect on product preference and that people had a tendency to rate the market success of a product in accordance with whether they themselves preferred that product. Handeland and Skogholt's (2018) study was not designed to measure the effect of self-attention on product preference and therefore additional research was necessary to explore the tendency further. Results from our study did suggest that increased self-attention had an effect on product preference and the relationship was moderated by the individual's environmental consciousness. However, the effect of self-attention was negative, meaning that when people with high environmental consciousness scores were made self-aware their preference for the unsustainable product increased.

A possible explanation for our finding, is that there are competing theories on the effect of self-attention. Our theoretical starting point for this study, which supports the findings of Handeland and Skogholt (2018), is that self-awareness is a state where attention is directed towards the self (Fenigstein et al., 1975), for example by the presence of a mirror. This type of self-attention typically induces behaviour that resonates with the subject's personal beliefs, values and attitudes, and makes them more likely to heavily rely on personal preferences in the decision-making process (Goukens, Dewitte and Warlop, 2009). Self-attention increases awareness of aspects of the self that are most salient at that point in time (Carver & Scheier, 1978). In our search of the literature we find two possible explanations for the trend we see in our results. Verplanken & Holland (2002, study 4) demonstrates the

role of the self by showing how value-congruent behaviour was triggered after participants first failed to act in accordance with that value. They argue that when a participant acted against personal values, self-completion was restored by compensating with value-congruent behaviour in the next task. This could also be the case in our study. If a subject first chooses the regular product, he or she might feel a sense of threat to the self when they are later asked about their personal beliefs regarding the environment. Then, they overcompensate when answering the questions in regard to environmental consciousness and social norms. This phenomenon can be explained through symbolic self-completion theory (Wicklund & Gollwitzer, 1981). According to this theory, a central value acts as a self-defining symbol. When an individual acts against such a symbol they will seek to restore balance through value-congruent behaviour if the opportunity arises (Wicklund & Gollwitzer, 1981).

Another theoretical viewpoint is that even though respondents scored high in environmental consciousness, we cannot know if these personal norms and values are central to their self-concept. Verplanken & Holland (2002, study 5) highlighted that increased self-attention led to congruent behaviour only for values that are central to the self. Our results for hypothesis 1 may suggest that environmental values are not a central part of the participants self-concept, even if they provide answers indicating that they are, when faced with the questionnaire. McClelland, Koestner and Weinberger (1989) makes a distinction between implicit and self-attributed motives. Implicit motives reflect spontaneous behavioural trends over time, whereas self-attributed motives reflect more immediate responses to situations or choices that one might be confronted with at a specific point in time (McClelland et al., 1989). Thus, in our study, it may be the case that answers reflects more self-attributed motives. Our assumption that high environmental consciousness scores reflects a part of participants identity may not be correct. Since self-attention increases awareness of aspects of the self that are most salient at that point in time (Carver & Scheier, 1978), the mirror would not produce the desired effect for these participants. In fact, the mirror might make other values or personal preferences salient, which would have an effect on the participants choice.

Self-attention did not have an effect on people's consensus estimates. It was argued that self-attention would make one's personal opinion regarding the two products more salient and therefore people would generally provide high estimates for the commonness of their own opinion when stood in front of a mirror (Marks & Miller, 1987). Consensus estimates were evenly distributed between the experimental group and the control group, with the control

group having slightly higher estimates, but this difference was non-significant. A competing theoretical foundation to what we've based our hypotheses on argues that self-attention boosts perspective-taking and increases objectivity, by taking other people's opinions into consideration (Gendolla & Wicklund, 2009). According to this view, self-attention decreases egocentrism as it makes people separate their own opinion from that of others. The study of Gendolla and Wicklund (2009) finds that self-attention decreases egocentrism under the critical condition that a cue for another individual's perspective is provided. This view would predict lower consensus estimates for the group exposed to the mirror manipulation. However, our study lacks the crucial element of a cue being provided to participants, which could explain why we see approximately identical consensus estimates across the two conditions.

Looking at the effect of self-attention on consensus estimates did not provide us with much insight. However, when comparing participants who chose the green product with participants who chose the regular product, we find that those who chose the regular product significantly overestimate the commonness of their own opinion. Those who chose the sustainable product did not overestimate according to true false consensus. However, they still estimated a majority of others would choose the sustainable product. These results support motivational perspectives for the false consensus effect. From a motivational perspective, the false consensus effect is a strategy used to uphold the feeling of normality. Previous research has found that people have a tendency to project their own opinion onto 'positive others' and perceive a dissimilarity between oneself and 'unattractive others' (Sherman, Chassin, Presson, & Agostinelli, 1984b). Studies have also found that when the 'self' is threatened people are less susceptible for information that contradicts one's own view or choice (Sherman et al. 1984a). Although participants in our study who chose the regular product provide lower estimates of consensus than people who chose the sustainable option, the error they make is much larger. This finding suggests that even though participants who chose the regular product recognise that they are in the minority group, they justify their choice by suggesting that almost 50% of others would also choose the regular product. In our analysis we looked at the interaction between self-attention and environmental consciousness on consensus estimates when the regular product is chosen. The interaction was non-significant, which means no conclusions can be drawn from the results. However, in light of the theory mentioned above and our results from hypothesis 2b, we find it interesting to mention that self-attention had a positive effect on participants who

scored high on environmental consciousness, but chose the regular option. That means the people who were highly environmentally conscious, but chose the regular option thought others would also choose the regular option. More research is needed to investigate this tendency further.

If we consider this in the context of the attitude-behaviour gap, the false consensus effect might be a strategy for normalising one's own shortcomings. Put into perspective, people who choose the regular product are too optimistic in their estimates of how many others would prefer the same option as themselves and people who choose the sustainable option are slightly pessimistic in regard to how many others would opt for the green alternative. It is important to highlight that our research only indicates behavioural intention, as we cannot know whether participants would actually buy the sustainable product. The tendency we find for consensus estimates could have a negative impact on actual behaviour in the purchase situation. Even if we see ourselves as a person who is environmentally conscious, the belief that many others fail to engage in a certain behaviour could help consumers avoid the feeling of cognitive dissonance.

The results from our study supports previous research suggesting personal norms to be a better predictor of behaviour than social norms. Environmental consciousness was significantly correlated with all three dependent variables, however for social norms no significant correlation was found. We also found a correlation between injunctive social norms and environmental consciousness scores which indicates that that there is a relationship between the two. The results highlight the importance of personal norms and values in predicting and possibly influencing behaviour. This finding is supported by other studies on norms and behavioural intentions (Doran & Larsen, 2016). Our study only focused on injunctive social norms. It may be the case that descriptive social norms could have explained some of the results for product preference, but this is only a speculation. From our findings we would argue that the expectations of important referents (injunctive social norms) is not enough to predict behaviour. They must, as argued by Doran and Larsen (2016), also be internalised as personal norms in order to change behaviour.

7. Limitations and Managerial Implications

In this section we will discuss the limitations and the managerial implications of our study. First, we discuss the limitations of our research design and methods for collecting and analysing data. The discussion will mainly focus on internal and external validity as well as the reliability of our research. Then, we will look at managerial implications, and lastly give some suggestions for future research.

7.1 Limitations

The main limitation of our research design is that participants were exposed to the manipulation while answering the whole questionnaire. Ideally, questions would have been answered after exposure to the manipulation. However, we could not remove the mirror once participants started the experiment and due to the possibility of demand effects; green identity, social norms and perceived effectiveness could not be recorded prior to the dependent variables. Consequently, the mirror manipulation could influence not just self-attention, but also the other variables. One item for the environmental consciousness measurement was found to have been affected by the mirror manipulation. This violates our assumption that environmental consciousness would not be affected by the manipulation and raises the question of whether it is appropriate as a moderator in our analysis. The item that showed a significant difference was the one referring to boycotting products that are bad for the environment. We note that, for the purpose of writing this thesis, we have used the moderator in our analysis. However, we realise that this may have had implications for our results.

For our experiment, internal validity refers to whether observed correlations between self-attention and our dependent variables reflect a causal relationship, or if the absence of a relationship implies that there is no cause (Shadish et al., 2002). To establish internal validity two cubicles with curtains were set up to ensure that the two groups were completely separate. Curtains were always kept closed so that participants would be unaware of any difference between the two cubicles. The mirror was made to look like a natural component of the cubicle, and we received no questions regarding the mirror from any of the participants. A limitation to our experiment is the lack of control variables. This was a trade-off between keeping the questionnaire short and concise and including several control

variables. We acknowledge that this is a limitation to our study because there might be other variables influencing the proposed relationships.

Our experiment used a questionnaire to gather data from participants, making measurement and construct validity important in order to establish whether our results are valid (Saunders et al., 2016, pp. 451-452). The questionnaire measured several dichotomous variables ('choice', 'moral' and 'effectiveness') where participants were asked to make a choice between the two products. The order of alternatives was kept the same for all three questions to ensure that there was no confusion or that the wrong alternative was chosen by accident. The measurement for consensus estimates was a replication of Ross' et al., (1977) procedure for measuring consensus estimates. The measurement has been widely adopted by researchers within this field of research. The measurement of environmental consciousness originally consisted of six items. However, after conducting a factor analysis, one item was removed. The items were adapted from the previous study by Handeland and Skogholt (2018), with the inclusion of two additional items. The measurement for social norms were based on Nigbur's et al. (2010) items for measuring injunctive social norms and additional observations in the literature. It can be argued that the lack of a pre-test of our questionnaire is a limitation of our study. However, as most of our measurements have been adopted from past research, we considered it to not be necessary. Because the measurements used in this study are based on previous research and reliable sources, we argue for strong internal validity, as well as construct validity of the experiment.

External validity refers to whether the research findings can be generalised to other relevant groups (Saunders et al., 2016, p. 204). As previously mentioned, we chose to conduct the experiment in a shopping mall because we believed this would offer a wide selection of people representable for the general public. The experiment was conducted on weekdays between 10.00 AM and 8.00 PM. This timeframe would allow any person to participate regardless of working hours. The sample was relatively large ($N = 210$) with 100 people in the control group and 110 in the experimental group. The distribution of males and females was also satisfactory.

It has been argued that framed field experiments are a good alternative to natural field experiments in regard to external validity, because framed field experiments are carried out in a field context and with the physical good (Lusk, Pruitt, & Norwood, 2006). The nature of the field experiment also allowed us, as researchers, to maintain control over the situation.

An aspect of framed field experiments that is often criticized is whether the behaviour displayed by subjects reflects ‘real’ behaviour, because subjects know they are part of an experiment which might lead to moralistic behaviour (Levitt & List, 2005). Climate change and environmentalism have been a huge part of public discussion as of late, and it is likely that some of our respondents would have chosen the sustainable product because they thought that was what we wanted them to choose. Social desirability bias might also be a limitation to the external validity of our study, as it is generally frowned upon in the national media to not be concerned about the environment.

The reliability of our study concerns whether the results would be similar if the same procedures were followed by other researchers at a different time (Saunders et al. 2016, p. 203). We made sure to provide the same information to all respondents before they entered the cubicles, and we were careful not to mention sustainability or the mirror when talking to potential participants. We did so in order to minimise respondent bias, which is when the respondents are influenced by the researcher in answering the questions (Saunders et al., 2016, p. 397). Our study was based on Handeland and Skogholt’s (2018) research design. As previously discussed, our outcome variables are dichotomous while Handeland and Skogholt (2018) used continuous variables to measure product preference and perceived effectiveness. Our study found an opposite effect to the one found in their data. Moralistic behaviour may be a limitation to the reliability of our measurement. We also find it relevant to raise a question regarding the mirror manipulation and whether it has the intended effect of increasing self-awareness. Perhaps an additional intervention is needed to make people focus on their reflection. Further research is necessary to determine whether self-attention is in fact increased by the presence of a mirror in our study.

7.2 Managerial Implications

The planet is facing incredible strain, and in order to slow down the negative development, measures need to be taken on all levels. Consumers are increasingly willing to make personal choices and sacrifices in order to lessen their environmental footprint. Consumers are also, to an increasing degree, exercising their consumer power. From a business standpoint, focus on sustainability is known to benefit the entire value chain, and be positive for the bottom line (Eccles, Ioannou & Serafeim, 2014). Although only one of our main

hypotheses were supported, we still had multiple interesting findings from our experiment. Findings on attitudes and behaviours related to sustainable choices have implications for managers and marketers working with sustainable products.

We observe a false consensus effect in our findings, indicating that people's estimates of what others choose is dependent on what they themselves chose. Furthermore, it seems that people choosing the regular product overestimate the commonness of their choice, whereas people who choose the sustainable product underestimate how many others do the same (i.e. true false consensus). This is an important tendency for managers to be aware of. Consumers contemplating whether to purchase the regular or sustainable option might be nudged to buy the sustainable product if some kind of 'correctness' information is included on the packaging. Consumers who want to choose the sustainable product, but feel unsure in the moment because they believe that not enough others buy the sustainable option, might also be positively influenced by a number indicating that the majority of others choose this option.

Green identity, represented here through environmental consciousness, is shown to be significant for behaviour in our research. Environmental consciousness is related to choice, what respondents believe others *should* choose, as well as estimates for the commonness of own choice. For managers it is important to understand that for consumers to change their behaviour or purchasing habits, they must first have personal norms and standards that support the desired behaviour. Marketing campaigns can focus on establishing such norms and values in order to influence consumers. Triggering personal norms in the purchasing situation might also be a useful tool to help increase sales of sustainable products.

Another interesting finding was that even though two thirds of the sample preferred the sustainable option, approximately 67% believe the regular product is the most effective. Although there is a willingness and desire to choose sustainable products, perceived lack of effectiveness can serve as a barrier in a real-life purchase situation. Judging from our study, better communication of the effectiveness of sustainable products could lead to more people choosing this alternative. For a product such as drain opener, effectiveness is possibly one of the most important drivers for choice. A clogged pipe is a concrete problem that people want an effective, quick fix for. Clearly communicating that the sustainable option will be as effective as the regular product could nudge consumers who are only concerned with effectiveness to opt for the sustainable product over the regular. Providing information on

the amount of product needed to solve the consumer's problem may also be a tool to lessen the consumer's insecurities in a purchase situation. This would also be a way to counteract the tendency Lin and Chang (2012) found in their study, namely that environmentally conscious consumers tend to use more product, due to the perceived lack of effectiveness in green products.

7.3 Suggestions for Future Research

This master thesis contributes to research on the effect of self-attention on sustainable product choices and the false consensus effect. Further research on this topic is advised, both due to the discrepancies in our findings, as well as the short time frame and general nature of a master thesis. As we did not obtain the results that we anticipated, more research is needed to determine the effect of increased self-attention on sustainable product preferences. Exploring why consumers have positive sustainable attitudes and green purchase intentions, but fail to act upon them, is important in order to promote more sustainable behaviour in the future.

This study did not find support for a clear effect of the mirror manipulation, although mirrors are well documented in previous research to increase self-attention. Therefore, we would advise to expand the manipulation range, and perform studies both with mirror manipulations and other manipulations of self-attention. Research supports the use of, for example, video cameras and audiences for increasing self-attention (Goukens, Dewitte & Warlop, 2009). Further research should also include a wider range of product samples. Drain openers serve a specific purpose, that for our sample was possibly too narrow to discover an effect of self-attention. With that being said, we would also encourage further studies using the same methodology and procedure but increasing the sample size. Performing the experiment over a longer period of time, including several locations could help make the study even more generalisable.

This study measured injunctive social norms. Descriptive social norms differ from injunctive social norms by telling us typical behaviour and actions of other people (Cialdini, Kallgren & Reno, 1991). Although we only applied injunctive social norm questions for this study, it would be interesting to explore whether there is a difference between perceived injunctive

social norms and descriptive social norms, in influencing standard-congruent behaviour in a sustainability context. Further research on this topic is suggested, as it can provide insights into what drives or affects sustainable choice. Exploring whether there is a difference between what ‘important others’ believe is appropriate versus what we actually witness in society, could help shine light on areas of improvement within sustainable living, as well as lay the foundation for measures to be taken in order to promote sustainable behaviour.

More research on the false consensus effect is needed to establish whether it acts as a bias in the decision-making process. In this study, consensus estimates are recorded after the choice has been made, and with no indication as to what is “correct”. Further research is needed to determine if false consensus is a latent bias, and whether respondents are influenced by this bias in the decision-making process. For example, it is possible to measure cognitive dissonance by giving information on whether respondents decision is the “wrong one”, followed by either the opportunity to project onto others or not.

Another finding that should be explored further is the difference between men and women for product preference, perceived effectiveness and moral judgements (see Appendix C, Table C.9, C.10 and C.11). For example, our results indicate that 97% of women believe others *should* choose the sustainable product. Future research might look at the difference between men and women for how they experience guilt in regard to unsustainable behaviour or whether women perceive issues of climate change to be more serious than men.

8. Conclusion

The purpose of this study was to explore the effect of increased self-attention on sustainable product choices. Furthermore, we wanted to examine the tendency to overestimate the commonness of one's own opinion, to see whether a false consensus effect was observed when subjects were faced with sustainable choices.

The study revealed a negative effect of increased self-attention on preference for the sustainable product. As environmental consciousness increased so did the preference for the regular product when participants were exposed to their own reflection. The result contradicts the prediction for the effect of increased self-attention on choice and other alternative theoretical explanations were explored in the discussion. High self-attention did not have an effect on increased consensus estimates, nor for moral beliefs regarding whether others *should* choose the same option as oneself. Although self-attention did not affect consensus estimates, a true false consensus effect was established. Respondents who chose the regular product overestimated the percentage of others who would choose the same product as themselves. In contrast, those who preferred the sustainable product underestimated the commonness of their own choice.

In conclusion, self-attention did not have an effect in two of the three hypotheses predicting its effect. High self-attention negatively influences 'green' consumers' product preference, making them more likely to opt for the regular product. However, strong inferences about the effect of self-attention cannot be made, as the effect is inconsistent. The results suggest motivational reasons for making assumptions about others, in order to uphold a feeling of normality. We suggest that those who choose the regular product justify their choice by predicting higher consensus for own choice and that those who choose the sustainable product underestimate how many others would choose the same alternative. This finding could help explain why sustainable products have not yet become first choice despite the increase in sustainable purchase intentions.

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Appendix

Appendix A: Field Experiment

Appendix A.1: Questionnaire

Hei!

Denne undersøkelsen utføres som en del av vår masteroppgave ved Norges Handelshøyskole og vil ta ca. 5 minutter å gjennomføre. Vi setter stor pris på din deltagelse - dine svar er verdifulle! Du vil motta et sentergavekort på 70 kr etter å ha fullført denne undersøkelsen.

Vi ber om at du leser spørsmålene nøye og svarer ærlig. Spørsmålene vil i hovedsak dreie seg om de to produktene du ser til høyre for deg. Dersom du opplever tekniske problemer underveis i undersøkelsen, ta kontakt med en av representantene utenfor.

Svarene dine er helt anonyme og vil ikke kunne kobles tilbake til deg. Alle opplysninger du oppgir vil bli behandlet konfidensielt.

Det er helt frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn. Dersom du trekker deg, vil svarene dine bli fjernet fra undersøkelsen.

Vennligst bekreft at du har lest informasjonen over, og gir ditt samtykke til å delta i undersøkelsen her:

- Ja, jeg ønsker å delta
- Nei, jeg ønsker ikke å delta

Q2

Kryss av for hvilket tall som står på veggen foran deg:

- Nummer 1
- Nummer 2

Q3

Se for deg at du har tette rør hjemme hos deg selv og du trenger en avløpsåpner. Du kan velge mellom de to ulike produktene du ser til høyre for deg. Produktene er fortsatt under utvikling og ser derfor litt uferdige ut.

På neste side vil vi stille deg noen spørsmål om disse produktene. Prøv å svare så ærlig som mulig på spørsmålene som følger.

Trykk på pilen nederst til høyre på siden når du er klar til å fortsette.

Q4

Hvilket av de to produktene ville du ha valgt dersom du hadde tette rør hjemme?

- Avløpsåpner med 100% naturlige ingredienser
- Vanlig avløpsåpner

Q5

På en skala fra 0 til 100%, hvor stor andel av **den norske befolkning** tror du vil velge det samme alternativet som **deg**?

Skriv prosenttallet du tror i boksen nedenfor

% vil velge det samme alternativet som deg.

Q6

Hvilket av de to produktene synes du at folk flest **burde** velge?

- Avløpsåpner med 100% naturlige ingredienser
- Vanlig avløpsåpner

Q7

Hvilket av de to produktene tror du er mest effektivt?

- Avløpsåpner med 100% naturlige ingredienser
- Vanlig avløpsåpner

Q8

Vennligst oppgi hvor enig eller uenig du er i hver enkelt påstand under, på en skala fra 1 til 7.

	Svært uenig 1	2	3	4	5	6	Svært enig 7
Det er viktig for meg at de produktene jeg kjøper er miljøvennlige	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg resirkulerer så ofte jeg har muligheten til det	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg føler meg skyldig dersom jeg velger et lite miljøvennlig alternativ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg føler meg bedre dersom jeg boikotter produkter som er skadelig for miljøet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg ser på meg selv som en miljøvennlig forbruker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg ønsker at andre skal se på meg som en miljøvennlig forbruker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9

Vennligst oppgi hvor enig eller uenig du er i hver enkelt påstand under, på en skala fra 1 til 7.

	Svært uenig 1	2	3	4	5	6	Svært enig 7
Mine venner og bekjente mener at man bør resirkulere når man har mulighet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mine venner og bekjente mener at man bør velge kollektiv transport når man kan.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mine venner og bekjente mener det er viktig å ta hensyn til miljøet i hverdagen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of survey

Tusen takk for at du deltok i denne undersøkelsen! Du mottar ditt gavekort på utsiden av båsen.

Merk at produktene du har vurdert er laget spesielt for denne undersøkelsen, og at det ikke er noen umiddelbare planer om å lansere dette merkenavnet på markedet.

Hvis du har noen spørsmål, ikke nøl med å kontakte oss!

Appendix A.2: Cubicles used for the experiment



Appendix B: Variables and Measures

Table B.1: Overview of variables with explanations

Variable

Name **Items** **Explanation**

Self-attention		High self-attention= mirror group, Low self-attention=control group
Choice		Which of the two products would you choose if you had clogged pipes at home

Consensus	On a scale from 0-100%, how many the Norwegian population would choose the same alternative as you
Moral judgements	Which of the two products do you believe others <i>should</i> choose
Effectiveness	Which of the two products do you believe is the most effective

Environmental
consciousness **Items**

Important	It is important to me that the products I buy are environmentally friendly
Recycle	I recycle as often as I can
Boycott	I feel better if I boycott products that are bad for the environment
Guilt	I feel guilty if I buy a product that is not environmentally friendly
Personal self	I see myself as an environmentally friendly consumer
Social self	I want others to see me as an environmentally friendly consumer

Injunctive
Social norms **Items**

SN1	My friends and acquaintances believe one should recycle as often as one can
SN2	My friends and acquaintances believe one should use public transport whenever possible

SN3	My friends and acquaintances believe it is important to environmentally conscious in everyday life
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Appendix C: Descriptive Statistics

Table C.1: Descriptive Statistics, Dependent Variable: Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regular	56	26,7	26,7	26,7
	Sustainable	154	73,3	73,3	100,0
	Total	210	100,0	100,0	

Table C.2: Descriptive Statistics, Distribution of Choices Across Groups

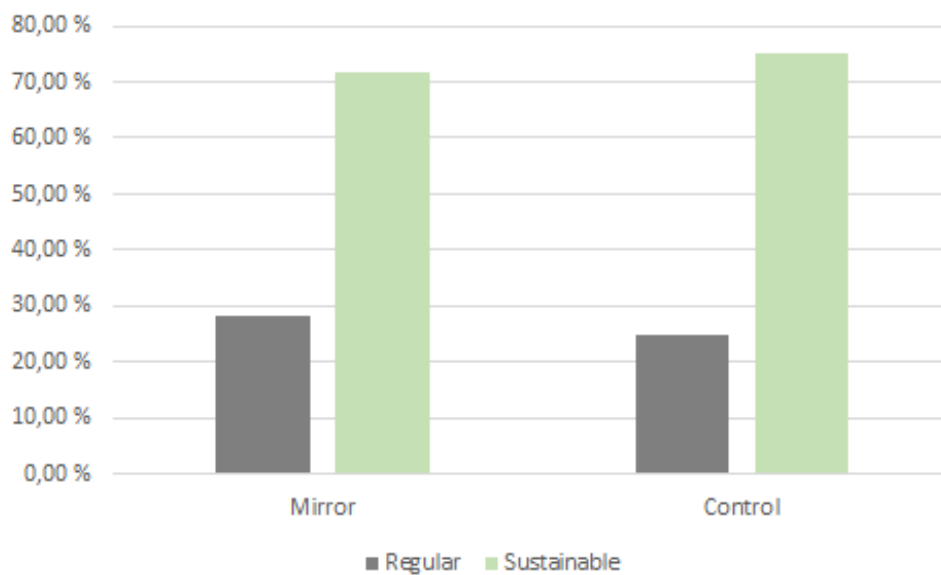


Table C.3: Descriptive Statistics, Dependent Variable: Moral

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regular	30	14,3	14,3	14,3
	Sustainable	180	85,7	85,7	100,0
	Total	210	100,0	100,0	

Table C.4: Descriptive Statistics, Dependent Variable: Consensus

	N	Minimum	Maximum	Mean	Std.	Skewness	Kurtosis		
					Deviation		Std.	Std.	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Error	Statistic	Error
Consensus	210	10,00	100,00	62,3571	21,33670	-.279	.168	-.432	.334
Valid N (listwise)	210								

Table C.5: Descriptive Statistics, Control Variable: Effectiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regular	141	67,1	67,1	67,1
	Sustainable	69	32,9	32,9	100,0
	Total	210	100,0	100,0	

Table C.6: Descriptive Statistics, Environmental Consciousness and Social Norms

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Environmental consciousness scores	210	1,4	7	4,66	1,257	-0,022	0,168	-0,541	0,334
Sosial Norm scores	210	1	7	4,75	1,152	-0,059	0,168	0,008	0,334

Valid N (listwise) 210

Table C.7: Descriptive Statistics, Environmental Consciousness Items and Social Norms Items

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Important	210	1	7	5,47	1,432	-0,752	0,168	-0,020	0,334
Recycle	210	1	7	5,71	1,485	-1,127	0,168	0,507	0,334
Guilt	210	1	7	4,09	1,803	-0,018	0,168	-0,903	0,334
Boycott	210	1	7	4,32	1,806	-0,082	0,168	-0,953	0,334
Personal Self	210	1	7	4,78	1,380	-0,129	0,168	-0,447	0,334
Social Self	210	1	7	4,63	1,600	-0,077	0,168	-0,747	0,334
Social Norm1	210	1	7	5,22	1,490	-0,793	0,168	0,302	0,334
Social Norm2	210	1	7	4,00	1,508	0,288	0,168	-0,341	0,334
Social Norm3	210	1	7	5,02	1,277	-0,268	0,168	-0,129	0,334
Valid N (listwise)	210								

Table C.8: Descriptive Statistics, Gender Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Women	119	56,7	56,7	56,7
	Men	90	42,9	42,9	99,5
	Prefer not to state	1	0,5	0,5	100
	Total	210	100	100	

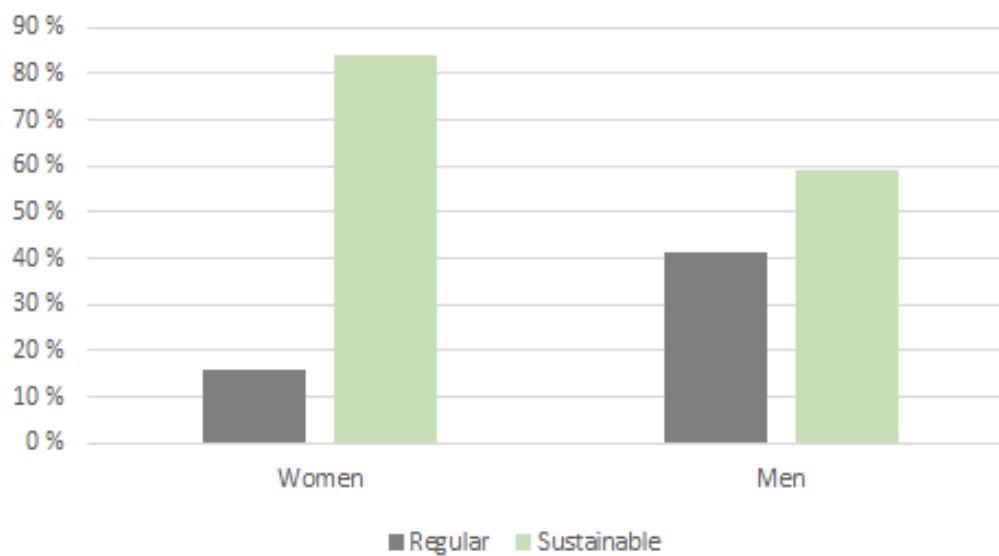
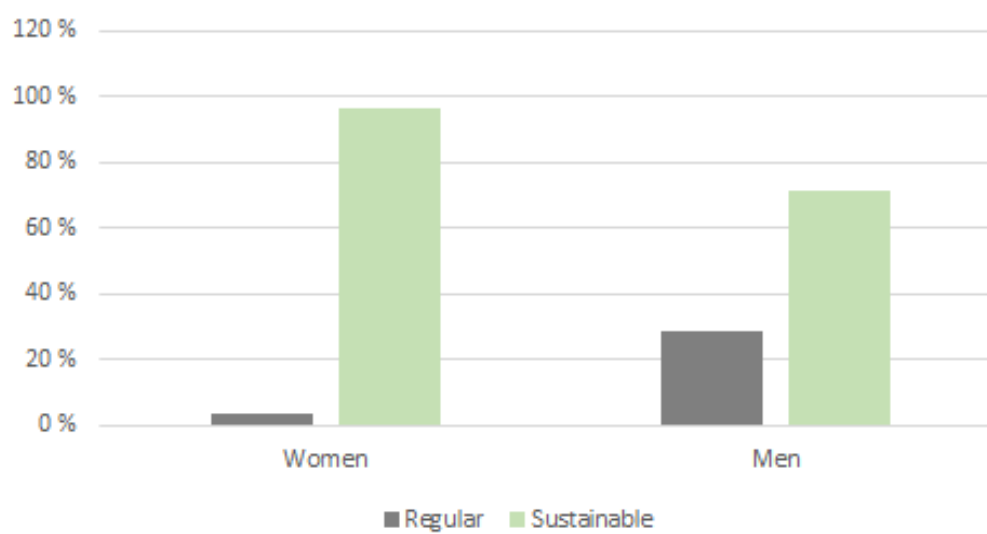
Table C.9: Distribution of Choices by Gender*Table C.10: Distribution of Moral Judgements by Gender*

Table C.11: Distribution of Perceived Effectiveness by Gender

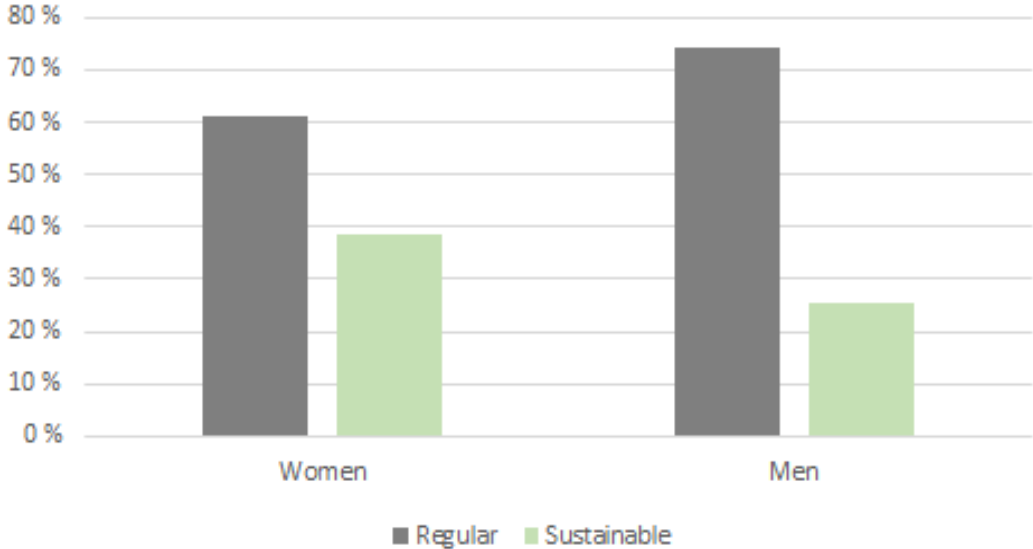


Table C.12: Mean Consensus Estimates for Genders

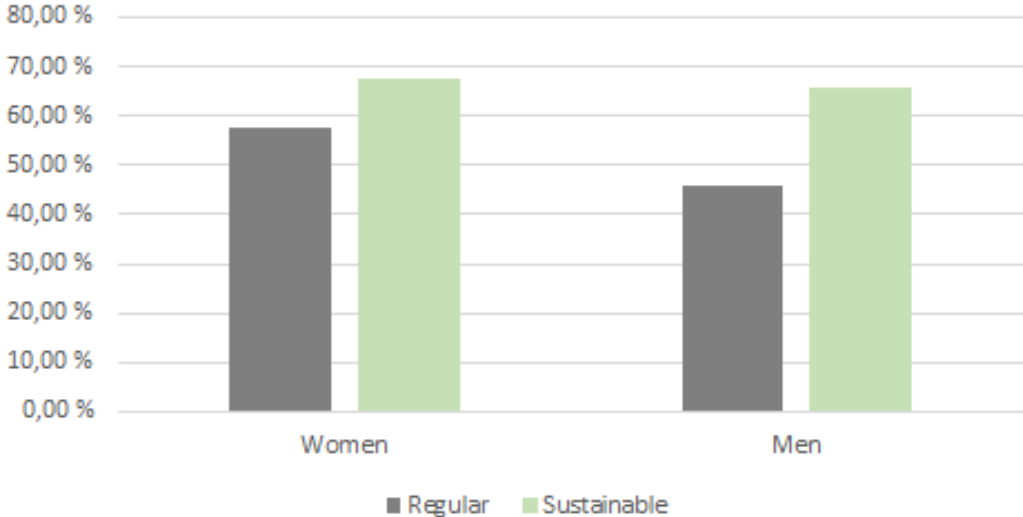


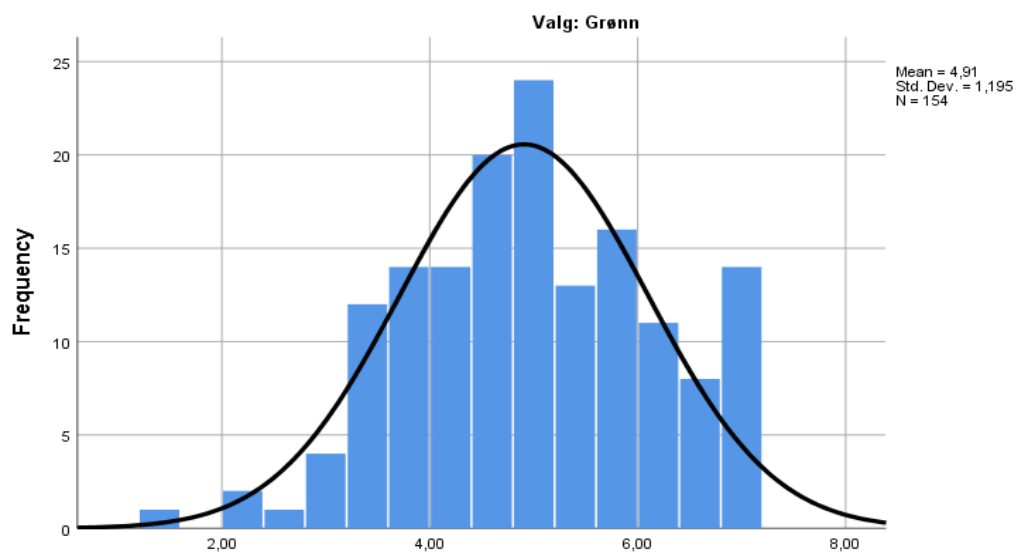
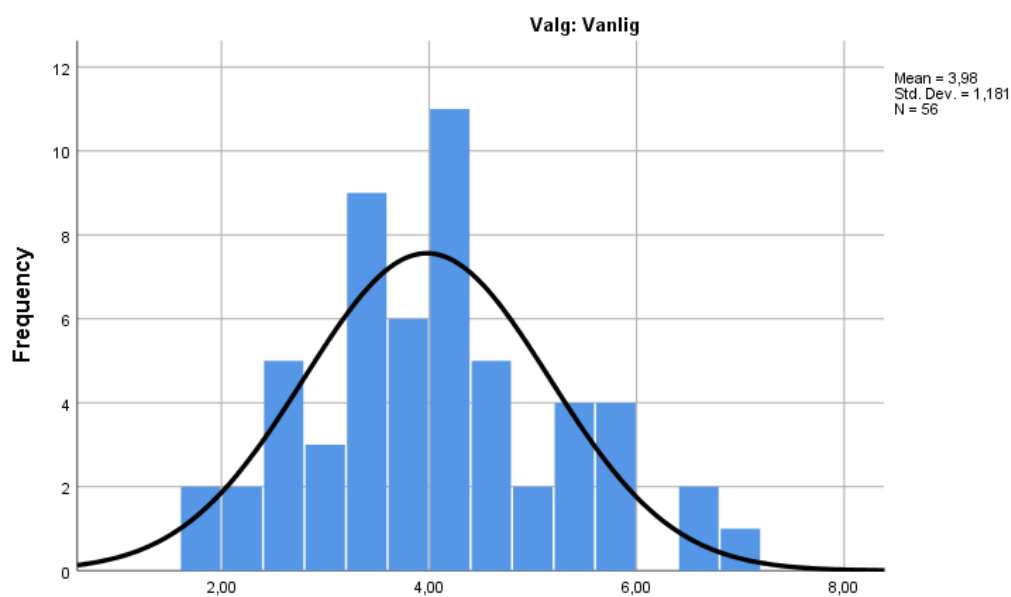
Table C.13: Distribution of Environmental Consciousness Scores for Choice = Sustainable*Table C.14: Distribution of Environmental Consciousness Scores for Choice = Regular*

Table C.15: Independent Samples T-test for Environmental Consciousness Scores

	Levene's Test for Equality of Variances			t-test for Equality of Means						
	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Environmental consciousness	Equal variances assumed	0,170	0,681	-4,985	208	0,000	-0,92662	0,18590	-1,29	-0,56

Appendix D: Merging of Measurements

Table D.1: Pattern Matrix^a from Factor Analysis

	Component	
	1	2
Important	0,724	
Recycle	0,487	
Guilt	0,788	
Boycott	0,787	
Personal Self	0,836	
Social Self	0,780	
Social Norm1		0,808
Social Norm2		0,757
Social Norm3		0,840

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.^a

a. Rotation converged in 4 iterations.

Table D.2: Reliability of Environmental Consciousness Scale

Items	Cronbach's Alpha if Item Deleted
Important	0,805
Recycle	0,838
Guilt	0,806
Boycott	0,807
Personal Self	0,787
Social Self	0,794

Cronbach's Alpha for scale = .834

Table D.3: Reliability of Social Norms Scale

Items	Cronbach's Alpha if Item Deleted
Social Norm1	0,729
Social Norm2	0,696
Social Norm3	0,505

Cronbach's Alpha for scale = .731

Appendix E: Results

Table E.1: Effect of Self-Attention on Environmental Consciousness Items

Levene's Test for Equality of Variances				T-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Important	Equal variances assumed	0,188	0,665	-0,206	208	0,837	-0,041	0,198	-0,432	0,350
Guilt	Equal variances assumed	0,353	0,553	-1,542	208	0,125	-0,383	0,248	-0,872	0,107
Boycott	Equal variances assumed	0,106	0,745	-2,312	208	0,022	-0,571	0,247	-1,058	-0,084
Personal norm	Equal variances assumed	0,078	0,781	-1,112	208	0,268	-0,212	0,191	-0,587	0,164
Social norm	Equal variances assumed	0,270	0,604	-0,419	208	0,676	-0,093	0,222	-0,529	0,344

Note: values in bold are significant on a $p < .05$ level

Table E.2: Effect of Self-Attention on Social Norm Items

Levene's Test for Equality of Variances				T-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
SN1	Equal variances assumed	0,007	0,935	0,101	208	0,919	0,021	0,206	-0,386	0,428
SN2	Equal variances assumed	0,105	0,746	0,964	208	0,336	0,201	0,208	-0,210	0,612
SN3	Equal variances assumed	0,109	0,741	0,499	208	0,618	0,088	0,177	-0,260	0,437

Note: values in bold are significant on a $p < .05$ level

Table E.3: Effect of Self-Attention on Environmental Consciousness Measurement

Levene's Test for Equality of Variances				t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
										Lower	Upper
Environmental consciousness	Equal variances assumed	1,448	0,230	-1,500	208	0,135	-0,25982	0,17322	-0,60	0,10	

Table E.4: Effect of Self-Attention on Social Norm Measurement

Levene's Test for Equality of Variances				t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
										Lower	Upper
Social norm	Equal variances assumed	0,383	0,537	0,648	208	0,517	0,10333	0,15936	-0,21083	0,41749	

Table E.5: Moderation Analysis, Gender = Female

Model

	coeff	se	Z	p	LLCI	ULCI
Constant	-4,1408	3,7033	-1,1181	,2635	-11,3990	3,1175
Mirror	1,4672	2,2274	,6587	,5101	-2,8984	5,8327
GreenID	1,5298	,9079	1,6849	,0920	-,2497	3,3092
Int_1	-,4818	,5230	-,9212	,3570	-1,5068	,5433

Table E.6: Moderation Analysis, Gender = Male

Model	coeff	se	Z	p	LLCI	ULCI
Constant	-8,3406	3,3715	-2,4739	,0134	-14,9486	-1,7326
Mirror	4,2181	1,9638	2,1479	,0317	,3690	8,0671
GreenID	2,2189	,8464	2,6216	,0088	,5600	3,8778
Int_1	-1,0820	,4782	-2,2628	,0236	-2,0192	-,1448