

EFFECTS OF BRAND PRIMING ON SUSTAINABLE CONSUMPTION
ATTITUDES AND BEHAVIORS

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ABSTRACT

EFFECTS OF BRAND PRIMING ON SUSTAINABLE CONSUMPTION ATTITUDES AND BEHAVIORS

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Research on factors affecting sustainable consumption tends to focus on enduring factors like personality traits, value orientations, and demographics. Little research has examined situational factors, such as marketing stimuli, which may promote or inhibit sustainable consumption. The present research attempts to understand how brand priming affects sustainable consumption attitudes and behaviors. Priming is a term that describes how a given unconscious stimulus affects subsequent psychological states and behaviors, such as decision-making. Within this scope, brand priming deals with how mere exposure to a brand can elicit behavioral changes and attitudes in response to the brand exposure. Effects of brand priming on various consumption behaviors have been examined; however, there is no research examining the effects of brand priming on sustainable consumer attitudes and behaviors. This research attempts to fill this gap by conducting two experiments. In the first experiment, subjects were primed with a luxury brand concept to test whether materialistic values could be activated and, in turn, affect sustainable consumption attitudes and behaviors. In the second experiment, subjects were primed with a sustainability positioned brand information to test whether altruistic values could be activated and, in turn, affect sustainable consumption attitudes and behaviors. The first experiment demonstrated that priming with luxury brands activated materialistic values, which decreased sustainable consumption attitudes and behaviors.

The second experiment demonstrated that priming with a sustainability positioned brand concept activated altruistic values, which increased sustainable consumption

attitudes and behaviors. Implications of these results for theory and practice, as well directions for future research are discussed.

Keywords: Priming, Materialism, Altruism, Brand Priming, Sustainable Consumption Attitudes and Behaviors



ÖZ

MARKA İLKİNLEMESİNİN SÜRDÜRÜLEBİLİR TÜKETİM TUTUM VE DAVRANIŞLARI ÜZERİNDEKİ ETKİSİ

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Sürdürülebilir tüketim davranışlarını etkileyen faktörleri inceleyen araştırmalar; bireylerin karakterleri, değer oryantasyonları ve demografikleri gibi kalıcı faktörleri incelemeye eğilim göstermektedir. Bunun sonucunda, sürdürülebilir davranışı destekleyen ya da kısıtlayan, anlık ve duruma bağlı olarak gelişen etkenlerle ilgili olarak çok araştırma yapılmamıştır. Bu yüzden, mevcut çalışma marka hazırlamanın bireylerin sürdürülebilir tüketim tutum ve davranışlarını nasıl etkilediğini anlamayı amaçlamaktadır. Hazırlama teorisi bilinçsiz bir şekilde maruz kalınan uyarıcı sonrasında bireyin davranışlarının nasıl etkilendiğini tanımlamak için kullanılmaktadır. Bu kapsamda marka hazırlama, bir markaya maruz kalmanın kişinin tutum ve davranışının nasıl değiştiğiyle ilgilenmektedir. Marka hazırlama teorisinin çeşitli tüketim davranışları üzerindeki etkisi önceden çalışılmış fakat bu yöntem daha önce sürdürülebilir tüketici tutum ve davranışlarının etkisini araştırmak için kullanılmamıştır. Mevcut çalışma bu eksikliği iki deney ile gidermeyi amaçlamaktadır. İlk deney katılımcıların lüks marka konseptine maruz kalarak materyalist değerlerin aktif olup olmayacağı ve bunun sürdürülebilir tutum ve davranışlarına olan etkisini gözlemlemektedir. İkinci deney sürdürülebilir olarak konumlandırılmış marka bilgisine maruz kalmanın özgecil değerleri aktif hale getirip getirmediği ve sürdürülebilir tutum ve davranışlarının nasıl değiştiğini gözlemlemektedir. İlk deneyin bulguları, lüks markaya maruz kalmanın materyalist değerleri harekete geçirdiğini göstermiş ve bunun sonucunda insanların sürdürülebilir tüketim tutum ve davranışlarının azaldığını ortaya koymuştur. İkinci

deneyin sonuçları ise sürdürülebilir olarak konumlandırılan bir markanın özgecil değerleri harekete geçirebildiğini ortaya koyarak sürdürülebilir tüketim tutum ve davranışlarında artışa yol açtığını göstermiştir. Bu bulguların teori ve pratiğe yansımaları, gelecekte araştırmacılar için yönlendirmeleri tartışılmıştır.

Anahtar Kelimeler: İlkinleme, Materyalizm, Özgecilik, Marka İlkinleme, Sürdürülebilir Tüketim Tutum ve Davranışları





To my loving parents

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LIST OF ABBREVIATIONS

ABBREVIATIONS

SCAs: Sustainable Consumption Attitudes

SCBs: Sustainable Consumption Behaviors

TRA: Theory of Reasoned Action

TPB: Theory of Planned Behavior

TBV: Theory of Basic Values

AVS: Altruistic Values

AC: Acquisition Centrality

AH: Acquisition as the Pursuit of Happiness

AS: Possession-defined Success

WTP: Willingness to Pay

MVS: Materialistic Values Scale

SRPD: Socially Responsible Purchases and Disposal Scale

GALS: The Generative Altruism Scale

AMOS: Analysis of Moment Structures

GFI: Goodness of Fit Index

CFI: Comparative Fit Index

RMSEA: Root Mean Square Error of Approximation

CMIN/DF: Chi-Square Mean/Degree of Freedom

AVE: Average Variance Extracted

CR: Composite Reliability

CHAPTER 1

INTRODUCTION

1.1. Chapter Outline

This chapter of thesis consists of five parts. In the first part, the main sources of the unsustainable consumption problem will be explained by providing literature findings. After that, sustainable marketing will be discussed by exploring the relationship between sustainability and marketing. Further, factors influencing sustainable consumption will be stated, and the discussion will continue by focusing on priming, values, and sustainability in the context of this study. Lastly, align with literature findings; research gaps, objectives and importance of this study will be discussed.

1.2. Main Sources of Unsustainable Consumption Problem

In the last decades of the twentieth century, people found out that the Earth's capacity to provide what people need is deteriorating. Man-made activities have caused an increase in the concentration of the greenhouse gas emissions, and because of this event, change in weather patterns became obvious with a continuous rise in global temperatures. Through deforestation, urbanization, auto emissions, production activities and the burning of fossil fuels, carbon dioxide concentration has increased in the atmosphere by 33 percent (Trudel, 2018). Also, the use of chemical substances like fertilizers and pesticides during agricultural products and cotton production had caused an increase in the global nitrous oxide concentration level. In addition to this, production processes to satisfy excess demand due to an increase in the population as well as the changes in the patterns of consumption to have a better quality of life had generated pressure on natural resources (Kilbourne and Pickett, 2008). With the increase in the population, natural resources had started to become scarce. By 2050, the world population is expected to reach 9.6 billion where people will require more than three planets in order to maintain current lifestyles (United Nations, 2019). Consumption patterns, total world population, and production process are considered among the main influencers that create pressure

on natural resources (Kilbourne and Pickett, 2008). Therefore, consumption and population are inherently associated with sustainability since every consumer's decisions about how much to buy and consume, how to dispose and recycle products have direct and indirect effects on both today's and future generations as well as on the environment (Trudel, 2018). For this reason, it is crucial to highlight what sources lead to unsustainable consumption.

Self-interested entities, consumers and firms, are considered as main sources of unsustainable consumption (Kilbourne et al, 1997; Young, 2018). Consumers want to maximize utility through consumption, whereas firms are trying to maximize profit by meeting the demand without considering the environmental impacts of their business activities (Huang and Rust, 2011). While doing that, firms are using marketing channels to reach their target market and get their attention. Dixon (1992) claims that the doctrine of marketing relies upon satisfying consumer's needs and wants which will generate profits for the businesses. Even the main flow of marketing literature gives emphasis to exceeding the previous year's sales target and not being able to reach that goal is considered as a business and management failure (Kilbourne et al., 1997). Furthermore, Özgen (2019) states that marketing activities cause the changes in the social culture in a way that consumer's needs and wants can only be satisfied by providing more variety and quantity. With such a strategy, companies would like to sell more in order to generate more profits.

Early stages of marketing slightly had given importance to the customer's role during the development process of products and firms had rather focused on achieving maximum efficiency by presuming that consumers would favor the products that were available and affordable (Kotler and Armstrong, 2018). Especially after the industrial revolution, firms have been able to target high efficiency in their production activities with the help of technological advancements; however, they have to differentiate their products in order to survive in the fierce competition within the industry (Kilbourne et al., 1997; Ozgen, 2019). The major flaw with this product concept was that companies assumed that they acknowledged what is best for customers during the production process, yet their attempts to meet consumer's real needs have been unsuccessful. Even these products were not able to

satisfy the needs of consumers; they would be hesitant to buy products that are designed and manufactured excellently (Ozgen, 2019). In order to eliminate this problem, the selling concept has emerged in marketing in order to persuade consumers to buy products that they don't actually need by promoting consumerism culture.

With the help of marketing strategies, products and brands are given a personality. Consequently, people have started to represent themselves by brands and products they are using. Moreover, people have intrinsic and emotional motivators which will make them purchase products that will provide status, amusement, social acceptance and self-fulfillment, and marketers are able to target those motivators. As a result of this, the effects of unconscious and insensitive consumption started to demonstrate their effects on the environment and society. This excessive consumption is driven by people's needs to express themselves by means of purchases they make and the products that they use (Ozgen, 2019). Data conducted by Özbakır et al. (2010) asserts that during the last 30 years, thirty-percent of Earth's natural resources had been completely destroyed for the sake of consumption, and more people are identified as shopaholics¹. The desire to acquire material possessions has reached an uncontrollable level for shopaholics and people accuse marketing for that because they claim that it leads to overconsumption (Alsmadi, 2007). Firms create demand through their marketing channels by exposing certain stimulus² and encourage people to purchase more without implying the environmental consequences of their purchasing decisions. However, in order to protect Earth's natural resources and future generations, marketing activities should give an emphasis to sustainable consumption patterns and encourage people to consume products that have minimal effects on the environment by offering a better quality of life. In line with that, the next section will aim to investigate the relationship between sustainability and marketing; also introduce factors influencing sustainable consumption.

¹ Definition of shopaholics: a person who obtains pleasure by excessive shopping and spending too much money as well as time on shopping ("Shopaholic", 2020).

² Definition of stimulus: an object that influences occurrence of behavioral response ("Stimulus", 2020).

1.3. Sustainability and Marketing

As sustainability started to gain popularity worldwide and recognized by society; organizations, marketers, as well as governmental and non-governmental organizations have transformed into more sustainable practices to restrain the negative impact of their business operations on the environment by joining the “Sustainable Movement”. Although the term sustainability has more than 300 definitions in the literature (Manderson, 2006), United Nations (1987) introduced a widely accepted and recognized definition of sustainability as “meeting the needs of the current generations without compromising the needs of future generations”. After this definition had been shared with the public, attention to sustainability has been increased drastically in the marketing literature, and scholars had begun to research a new concept called “sustainable marketing”.

The conventional definition of marketing tends to focus on the actual purchase of goods and services while the main idea is to get the customer to purchase; however, what consumers buy, how they consume and dispose products have been shaping every aspect of our planet (Baker, 2013). On the other hand, the nature of sustainable marketing considers the collective consequences of people’s consumption behaviors. At the same time, it focuses on satisfying present needs and wants with a minimal detrimental impact on the environment by considering the well-being of future generations (Baker, 2013). However, even if firms efficiently utilize sustainable marketing practices, making customers buy green products is not an easy task because people who claim to be concerned about the environment are not the actual buyers of sustainable goods.

Although consumers are more conscious of the environment since the early 1970s, they are struggling to transform their sustainable attitudes towards actual sustainable behaviors which is called as attitude-behavior i.e., the values-action gap in the literature (Young et al, 2010). It occurs when people develop a positive attitude towards behaving environmentally conscious; however they do not take any action to achieve sustainable behavior (Ajzen, 1985; Kilbourne et al., 1997; Kilbourne and Pickett, 2008, p. 885; Koppes, 1995; Prothero et al., 2011). Hughner et al. (2007) illustrate that although between forty-six and sixty-seven percent of the population

holds favorable attitudes towards organic food consumption, only between four to ten percent of this population consume sustainable food products. Similarly, another research conducted by Defra (2007) claims that thirty percent of UK consumers state that they struggle to transform those attitudes into actual green consumption behaviors although they are concerned about the environment. For this reason, it is crucial to understand why the values-action gap persists and what are the potential motivators that will encourage consumers to perform more sustainable behavior patterns in their purchasing decisions.

When consumers consider adapting an environmentally conscious lifestyle, they are interpreting highly complex decision-making due to an individual's self-interested benefits and motivations, nature of the market and society, as well as situational contexts during the purchasing process (Moisander, 2007; Young et al., 2010). Young et al. (2010) indicate that the situational context for each consumer is important and determined by interdependent factors like time, experience, lifestyle, environment and price. Similarly, other situational factors that affect consumer's decisions can be related to brand characteristics which include the brand name, image, reputation, knowledge and prior experience with a specific brand. Consumers use those situational factors as cues while engaging in sustainable lifestyle patterns, and in order to lessen cognitive effort, they use shortcuts provided by brands (Sammer and Wüstenhagen, 2006).

Several factors are affecting why or why not consumers choose greener alternatives in their purchasing behaviors. It is crucial to investigate and highlight those factors so that sustainable consumption can be enhanced because consumers are one of the key factors in sustainable movement, and without their participation, the mission of making the world "a better and greener place for present and future generations" cannot be achieved. With the help of consumer behavior, scholars, policymakers, and firms can understand the actual motives and factors behind people's sustainable and unsustainable consumption behaviors.

While investigating factors affecting consumers post end pro-environmental purchase behaviors, many scholars had focused on enduring factors such as demographics (Tilikidou and Zotos, 1996), the psychographic profile of consumers

(Kurusu and Bortoleto, 2011; Tang and et al. 2011), fundamental beliefs (Eckberg and Blocker, 1996) and internal value orientation of consumers (McCarty and Shrum, 2001). However, consumers green purchasing decisions are not always driven by enduring factors. Sometimes their decision is influenced by situational factors. While shopping, they are surrounded by stimulus and cues which interfere purchasing decision process and led people to have different patterns of consumption. What is more, they are exposed to brands and advertisements, and sometimes those can lead consumers to perform unsustainable attitudes and behaviors by just being exposed to a marketing stimulus.

In marketing, one of the widely used and powerful methods to influence people's present and future behavior is called priming and as a result of priming, consumers may perform consumption patterns that contradict with their personality, psychographics, or their values. Align with that, the next section of this chapter will provide information about how priming, specifically brand priming, influence consumer's purchasing decisions, what role values have during that process and how these affect consumers' sustainable consumption decisions.

1.4. Priming, Values and Sustainability

Priming is defined as a “nonconscious form of human memory” (Tulving and Schacter, 1990) which is used to influence individuals' behaviors by exposing a stimulus without any conscious recollection of memory representations (Schacter, 1992). When people are primed with a marketing stimulus such as brand name or concepts, nonconscious exposure can activate subsequent behaviors toward a stimulus. As a result of this, automatic effects on behavior could be triggered (Baxter et al., 2018; Brasel and Gips, 2011; Fitzsimons et al., 2008; Mantovani and Galvão, 2016; Pryor and Brodie, 1998). For example, when people are primed with the “Apple brand concept” which is positively linked with “being creative”, it had been observed that people had started to behave more creatively (Fitzsimons et al., 2008). In another similar study, it is also discovered that if people are exposed to “Red Bull” which represents brand identity characteristics such as “speed, energy and risk-taking”, a brand prime can lead people to perform similar type of behaviors that are being prone to risk taking or being vibrant (Brasel and Gips, 2011).

Brand priming not only alters the way people behave but also can trigger certain value systems and as a result, consumption behavior may change. For instance, if people are primed with a brand advertisement that gives emphasis to hedonic wants and possessions, materialistic values can be stimulated, and materialistic people can use these cues as a comparison while choosing among the products and brands (Maher and Hu, 2003). When materialistic values are triggered, people acquire possessions for the sake of consuming and tend to choose symbolic products which will provide status and enhance the quality of life (Campbell et al., 2011). There besides, mere exposure to a green product concept can induce altruistic values that are appertaining to social responsibility and being environmentally conscious (Mazar and Zhong, 2010). Besides, altruistic people have a higher level of motivation to satisfy other's needs without expecting any external rewards and they are prone to be ethically and morally responsible in their consumption behaviors.

The relationship between values, attitudes and behaviors had been examined intensively for the last century, and values are described as "transsituational goals". Also, they form a guiding principle in people's lives, including their consumption decisions and patterns (Schwartz, 1992, p. 17). Investigating values under the field of social and environmental psychology is important because values not only affect sustainable beliefs, attitudes and behaviors but also help to identify differences and similarities between individuals, groups and social institutions (Rokeach, 1973). In his work, Schwartz (1992) specified universally accepted ten value types that can also diverge across individuals and cultures (e.g., hedonism, universalism, achievement, spirituality, benevolence). De Groot and Steg (2007) pursued Schwartz's work and developed a small scale that includes three value clusters relevant to sustainability: hedonistic (materialistic) values, benevolence (altruistic) values and biospheric (environmentalist) values.

Materialism and altruism have been strongly linked to sustainability, and they are considered as one of the discriminative and predictive factors of sustainable attitudes and behaviors (Kilbourne et al., 1997; Kilbourne and Pickett, 2008; Tilikidou and Zotos, 1996). Materialism has various definitions in the literature (Zinkhan, 1994; Richins and Dawson, 1992; Sirgy, 1998; Mukerji, 1983; Ward and Wackman, 1971),

but in the context of this thesis study, it is defined as “the importance a consumer attached to world possessions” and mainly driven by three personality traits which are possessiveness, nongenerosity and envy (Belk, 1985). Materialism also influences the actual purchase and consumption of the products since materialistic people have a high tendency to acquire symbolic products which will offer status and social recognition (Sirgy, 1998). On the other hand, altruism can be described as disinterested and selfless concerns to help and care for others without expecting any external rewards and benefits (Büssing et al., 2013; De Dominicis et al., 2017; Piliavin and Charng, 1990). Also, altruistic people are environmentally conscious, ethical, and responsible in their purchasing decisions (Shukor et al., 2017).

In sustainable consumer behavior literature, many scholars claim that sustainability and altruism are positively related with each other. It implies that as people become more altruistic and have a higher value of caring for others, their sustainability level increases, and they engage in more sustainable attitudes and behaviors (Mazar and Zhong, 2010). To illustrate, altruistic people tend to acknowledge environmental protection policies and have a high level of motivation to participate in environmental activism (Steg et al., 2014). Moreover, people who strongly favor altruistic values are more open to reduce their car usage, and environmental protection is one of the factors affecting their purchasing decisions (Shukor et al., 2017) because altruistic people feel responsible for society and by purchasing environmentally friendly products, they are able to satisfy that urge (Mazar and Zhong, 2010). On the other hand, an individual who is high on materialistic values will be self-centered and less likely to attain satisfaction through pro-environmental activities (Tilikidou and Delistavrou, 2001). In addition to this, at the highest level of materialistic values, there is a drastic increase in overconsumption which leads to unsustainable attitudes and behaviors. As a result of this, they will be enhancing self through conspicuous consumption by acquiring products from prestigious brands (Zinkhan, 1994; Maher and Hu, 2003).

However, past research investigating the relationship between altruism, materialism and sustainability tend to assume that values do not change based on the situational factors and they are enduring. Furthermore, past studies reveal that

situational factors may alter individuals' sustainable consumption decisions. In the next section, this influence will be explained by stating literature findings and align with that research gaps and objectives of this study will be presented.

1.5. Research Gaps and Objectives of This Study

In order to examine how materialistic and altruistic values can affect sustainable attitudes and behaviors in a situational context, the current research employs a brand priming method to manipulate personal values since primed categories serve as a standard of comparison for judgments while engaging in consumption decisions. Previous literature findings reveal that materialistic people have significant consumer behavior pattern which is choosing products based on the brand names by neglecting utilitarian benefits (Campbell et al., 2011; Maher and Hu, 2003; Shukor et al., 2017). What is more, if the brand claim (providing status and good life) and individuals' value systems are similar along with hedonistic values, then they will make judgments towards the primed context (Maher and Hu, 2003). It means that if a participant is exposed to a brand that promotes luxury, materialistic values can be activated. For altruistic people, information processing during purchasing is significantly different. They have a strong motivation to benefit others, and they need to enhance themselves by benefiting others by consuming a brand that does the same. Overall, how value systems can influence behavioral changes has caught enormous attention in the sustainable marketing literature and it is still considered as the infancy stage.

Understanding each consumer's motivation can be compelling; however, it is crucial to highlight factors that affect consumer sustainable attitudes and behaviors in order to enhance sustainability. By taking past studies into consideration, they try to understand what makes people consume sustainably or unsustainably through investigating enduring factors such as personality traits, internal value orientations and demographics. But what happens when an individual sees a marketing slogan promoting luxury? Consider a woman shopping for a pair of Aquazzura shoes and sees a brand slogan which is "If the shoes fit buy them in every colour!", will she buy another pair of expensive shoes just because she is exposed to a brand stimulus and perform unsustainable behavior? How will that brand stimulus affect her

sustainable attitudes and behaviors (SCAs/SCBs) while leading to overconsumption? And by being primed by the brand slogan, which value systems will be activated?

Previously in the cognitive psychology and marketing literature, it is suggested that if people are being primed with brand attributes, their value systems can be activated. However, none of the researchers attempted to investigate how brand priming can affect SCAs/SCBs and what is the psychological process by which it occurs. In the light of literature findings which were briefly explained, this thesis study will attempt to understand how brand priming affect sustainable consumption attitudes and behaviors. The current research furthers this aim in two ways: first, we propose that if people are primed with the luxury brand concept, a mere exposure may activate materialistic values which will lead to unsustainable attitudes and behaviors. Second, unlike materialism, exposing people to a sustainable brand concept may trigger altruistic values, and in turn, an increase in sustainable attitudes and behaviors can be observed.

In the following chapters of this thesis, inclusive literature analysis on related concepts will be reviewed and presented. Next, hypothesis development will be established conceptually and measures regarding materialism, altruism, and SCAs/SCBs will be analyzed while selection methodology is explained in the following section. Accordingly, the statistical results of the study will be presented. The last chapter of this thesis will cover discussion, future implications, research limitations, and future research prospects.

CHAPTER 2

LITERATURE REVIEW

2.1. Chapter Outline

This chapter of the thesis is divided into three main sections. In the first section, a literature review used of research sustainable consumer behavior will be conducted to provide definitions and explain the concepts of sustainable consumption, sustainable consumption process, green products and green consumers, sustainable marketing, sustainable consumption attitudes and sustainable consumption behaviors, attitude-behavior gap and factors affecting SCAs and SCBs. Aligned with the research aims which were mentioned in the previous section, the current research will focus on the value orientations of individuals in order to examine the attitude-behavior gap with specific reference to the concepts of materialism and altruism. In the last section, the priming method will be explained by focusing on brand priming.

2.2. Introduction to Sustainable Consumer Attitudes and Behaviors

2.2.1. The Concept of Sustainable Consumption

A dramatic increase in the population and proliferation of products in the marketplace variety have led to unsustainable natural resource utilization without considering future generations. Especially, organizations have continued to perform business activities that are primarily focused on making a profit by neglecting that natural resources are limited. Although more and more people are awakening to the necessity of adapting sustainable consumption habits, more progress is required to transform environmentally friendly goods and services into a trend. Promoting sustainable purchasing among individuals is crucial because 40 percent of the environmental damage is occurring as a result of household purchases (Joshi and Rahman, 2015). Adapting a sustainable marketing approach as a guide in both consumption habits and decision-making mechanisms will help preserve natural resources for next generations. For this reason, marketing strategies have evolved into more sustainability-oriented approaches during the last 20 years. Many organizations have included high environmental standards in their marketing

strategies and emphasized incorporating sustainable practices into actual consumption behaviors (Alsmadi, 2007).

The term sustainable consumption was first introduced in 1980 by the International Union for Conservation of Nature and Natural Resources (IUCN) and defined as conscious and effective management of the ecosystem, biodiversity and natural resources for human benefit without endangering other species (IUCN, 1980). In 1994 at Oslo Symposium, United Nations (UN) established a more comprehensive and widely recognized definition of sustainable consumption which is *“the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of further generations”*. In addition to this, sustainable consumption not only refers to environmentally conscious purchasing decisions in which end users consider the environmental impact of their purchasing, consuming and disposing processes of acquired goods and services (Moisander, 2007), but also abstaining from products and services causing environmental damage (Chan, 2001). In general, sustainable consumption is a blanket term that is used to indicate several issues such as fair share of natural resources based on human needs and wants, increasing quality of life, effective management of resources, and enhancing consumer health and safety (Mont and Plepys, 2008). Examining past research conducted by scholars, various terms are used to indicate sustainable consumption such as socially conscious consumption (Webster, 1975), green consumption (Joshi and Rahman, 2015), environmentally responsible consumption (Moisander, 2007), and pro-environmental consumption (Chen et al., 2011). In the context of this thesis study, these terms will be used interchangeably to refer to sustainable consumption.

Seyfang (2006) emphasizes the importance of several factors to achieve sustainable consumption. Firstly, he states the importance of forming sustainable communities which will help to transform to a greener society by encouraging people to behave in a more sustainable manner. Secondly, it is crucial to establish

organizations that are inspecting whether environmental laws and regulations are applied effectively and properly. Lastly, the sustainable consumption process should be understood as well as the factors affecting it so that both producers and consumers can act collectively in order to achieve a sustainable future (Seyfang, 2006). Thus, examining the sustainable consumption process and understanding the existing factors affecting green consumption will be a good starting point since these efforts will help ensure environmentally conscious consumption and manage natural resources in an efficient way.

2.2.2. Sustainable Consumption Process

The consumer buying process consists of a series of stages when consumers are attempting to purchase a new product or service. For marketers and policy makers, it is important to understand each stage and the implications for the final purchasing since it would enable them to develop strategies for enhancing green consumption. In each step of the purchasing decision process, consumers are engaged in different activities such as information search, evaluating various information, of satisfying a specific need. To explain sustainable consumption process, most scholars use one of the widely accepted consumption decisions making model that consists of six steps (see Figure 2.1). Belz and Peattie (2013) modified the consumer decision-making process by adapting a sustainability-oriented approach and developed one of the well-established explanations of the sustainable consumption process. They investigated each stage and explained how sustainability can affect consumer attitudes and behaviors within each step of the decision-making process.

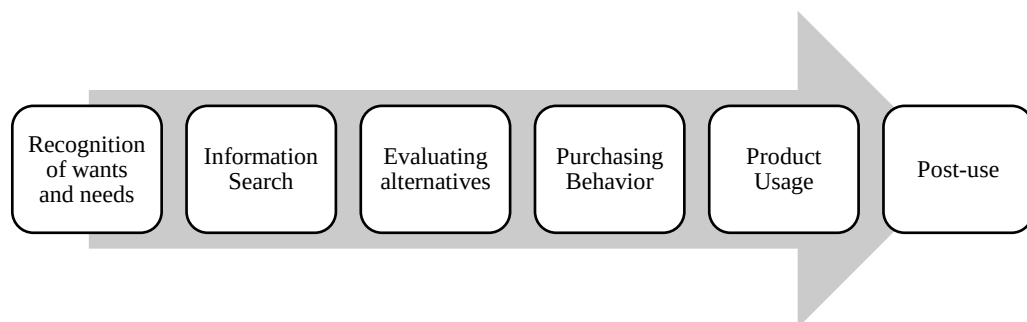


Figure 2.1. Consumption process: adapted from Belz and Peattie (2013, p. 277)

Based on their analysis, at the first stage of the buying decision process, consumers become aware of their wants and needs to make a purchase depending upon their fundamental, social, or emotional needs such as social acceptance and status. However, people's needs and wants can either contradict or interact with each other, and marketers are responsible for transforming those into more sustainable choices (Belz and Peattie, 2013). After consumers recognize their wants and needs, they start to search for information and evaluate possible alternatives in their purchasing behavior. While searching for information, they process a variety of social, economic, and environmental inputs that are linked with product choices in the market. Consumers use that information to compare between regular and green products so that they can make a choice between alternatives. Belz and Peattie (2013) point out that during this process, if consumers are overloaded with information, they rely on trusted brands or corporate social responsibility activities of specific retailers so that they avoid from processing excessive information. For example, retailers like Migros use the "top toe" approach to achieve sustainability. The top toe approach ensures that each Migros store will conform to minimum social and environmental standards. As a result, when consumers visit one of the Migros stores, they use that information provided by the brand to acknowledge that any of the products that they buy will be compatible with sustainability standards.

After the information search and alternative evaluation, actual purchase behavior is performed. Consumption has always been one of the focal points of marketing; however, sustainability marketing focuses on altering consumption behaviors into more environmentally friendly options (Özbakır et al., 2010). This step not only includes acquiring goods and services but also consumers can reflect their sustainable beliefs through refusing to buy certain products and services while finding more sustainable alternative options to satisfy their needs and wants (Belz and Peattie, 2013). Next, at the product usage stage of the process, the actual usage may result in more environmental impacts compared to the production stage. At this stage, sustainability-oriented consumers may try to extend the product life cycle and increase the product efficiency. At the very end of the consumption process, which is post-use, conventional marketing gives importance to repeating a purchase.

However, the sustainability-oriented approach involves disposing the goods into systems where the product can be used as a raw material again or transformed into another usage during manufacturing (Belz and Peattie, 2013). Overall, sustainable consumption process starts with a recognition of needs and wants and ends with post-usage of acquired goods. One of the crucial facts during this process is to encourage people to consider and engage in more environmentally conscious decisions so that sustainability can be enhanced. However, without understanding who the green consumer is, what factors may affect their decision processes, and how they may be influenced, it might be challenging to promote sustainable consumption.

2.2.3. Green Products and Green Consumers

With the increasing awareness of the concept of sustainability by consumers, new concepts starting with “green” have become quite fashionable (*such as green innovation, green marketing, green strategies, etc.*). Green consumer and green products are among these popular terms (Sdrolia and Zarotiadis, 2019). “The concept of green” is perceived as powerful and reminiscent by consumers and it has served the purpose of getting their attention. However, as attention towards concepts starting with the word “green” has started to increase, many scholars, policy makers, businesses and marketers have used different terms referring to green words because they believe that the term might be vague and insufficient to accentuate sustainable attributes. For example, Sdrolia and Zarotiadis (2019) conducted a comprehensive study on green product research and reviewed more than one hundred selected journal articles. Based on their analysis, scholars used the terms following interchangeably to refer to green products: *“ecological product, eco-friendly product, eco-product, environmentally-friendly product, and sustainable product.”*

Green products seek to satisfy consumer needs while minimizing the harmful impacts on the environment through the whole life-cycle and aim to produce a better quality of life across generations (Chen and Chang, 2013; Durif et al., 2010; Mattioda et al., 2013; Tseng and Hung, 2013). They are ecologically superior as green products maximize resource efficiency by decreasing the amount of waste (Chan, 2001; Joshi and Rahman, 2015; Moisander, 2007). There are many products in the market

claiming to be green; however, it is important to indicate what makes a product green. What are the distinctive characteristics of green products? How can consumers distinguish green products while shopping and what type of information do they need during the buying process?

Scholars identify several characteristics of green products that may guide consumers to follow more sustainable consumption patterns. First of all, green products are not considered as a danger for the people and animals' health since they do not contain any hazardous or toxic material (Wee et al., 2011; Wong, 2012). Secondly, they don't produce harmful effects on the environment and use disproportionately less natural resources during production, use and disposal (Moisander, 2007; Wong, 2012). Some green products are produced locally with the intention to lower the carbon footprint during distribution processes (Panjaitan & Sutapa, 2010). And lastly, they are produced from recyclable materials and they use eco-friendly packaging (Chen and Chang, 2013; D'Souza, et al., 2007; Nimse et al., 2007).

Most green products are purchased by so-called green consumers because other consumers are mainly interested in purchasing and consumption for typical reasons. On the other hand, environmentally conscious consumers, or green consumers, are concerned about consuming scarce resources of the planet. They feel a responsibility towards the society while they have a high level of motivation to express those concerns in their buying behaviors through sustainable consumption and purchasing (Carrington et al., 2010). Also, in their buying decision, ethically minded consumers consider different aspects of consumption relating to sustainability such as worker's rights, fair trade options, animal cruelty, and country of origin. Research examining a green marketing approach indicate that consumer demand will be in the direction of green products over time, and it will be a long-term trend rather than being a short-term fashion. Green consumers take cognizance of the environmental impacts of their acquired goods and services while they try to use their purchasing power to convey social change (Moisander, 2007).

Although each green consumer has different characteristics and motivations while shopping, some scholars defined prominent characteristics of green consumers which will help businesses for understanding consumer needs and better targeting ecologically conscious consumers. Ozcan and Ozgul (2019) developed a profile of green consumers and according to them, green consumers:

- Play an active role in society and do not hesitate to share their opinions with the public.
- Believe that environmental pollution is a threat to the welfare of society and lowers the quality of life.
- Discuss product features with others and consult consumer reports and publications to seek for information related to sustainability.

2.2.4. Sustainable Marketing

Environmental consciousness among consumers has increased during the last 20 years because of increased media coverage of environmental issues, the practicing of environmental laws and regulations on global platforms and increasing awareness of the effects of industrial and environmental disasters on society. As a result of these, consumers are more concerned about the impacts of their everyday activities and consumption habits on the environment. In the meantime, businesses have started to see these concerns as a marketing opportunity to develop both short-term and long-term sustainability marketing. Pressure coming from media channels, non-governmental organizations, and competition in the industry has forced organizations to implement these strategies in their marketing activities.

Marketing has been accused of being one of the main factors leading to unsustainable consumption among consumers by creating false wants, promoting conspicuous consumption, excessive production, and leading to wasteful pollution (Saha and Darnton, 2005). Furthermore, there are criticisms towards green marketing because by using powerful terms such as recyclable, organic, natural and biodegradable, many people claim that these advertising strategies had deceived consumers (Saha and Darnton, 2005). Also, some businesses have gone farther and

implemented greenwashing³, while others have used this opportunity to charge higher prices for sustainable goods by claiming superior quality (Crane, 2000). Consequently, these poor strategies applied in sustainable marketing have created a backlash since it has failed to provide what should have been offered to consumers. One of the well-known greenwashing practices which was performed by Volkswagen demonstrates that performing such activities may harm how stakeholders perceive the brand. For example, after Volkswagen Scandal happened in early 2014, it had caused brand to lose 22 percent of its market share in one day on stock exchange, which is considered as the worst financial breakdown since 2008 (Siano et al., 2017). Nonetheless, marketing may exert a strong influence on buying behaviors and may encourage people to consume sustainability, recycle, reuse, encounter ethical purchasing and choose biodegradable materials by applying appropriate strategies (Gordon et al., 2011; Saha and Darnton, 2005).

Sustainable marketing has been investigated through the years by many scholars who have used different terms to indicate it (e.g., green marketing, environmental marketing). Sustainable marketing is the marketing activities of a firm that give emphasis to environmental issues and reducing the harmful impacts on the environment (Charter et al., 2002). Similarly, Peattie (2001) defines it as an integrated management process that is responsible for determining, predicting and satisfying consumer's needs and wants in a profitable and environmentally friendly way. It encourages organizations to modify products, services, and packaging to comply with sustainability standards as well as changing the production process and advertising strategies. In order to develop a proper and correct green marketing strategy, firms should fully understand not only the life cycle of commercialized green products and services but also their impacts on the environment, in order to promote the organization's corporate image (Saha and Darnton, 2005). When organizations' marketing activity give importance to sustainability, they should

³ Greenwashing occurs when a business represents itself as a sustainable organization by creating a false impression or presenting misleading information through advertising and marketing strategies to attract more consumers (Crane, 2000).

follow a different way of thinking since they commercialize green products that have different characteristics from conventional products.

What sustainable consumers value and consider during the buying process is also different from regular consumers. Generally, sustainable consumers have positive attitudes towards eco-friendly goods, but they struggle transforming those favorable attitudes into buying behavior (Joshi and Rahman, 2015). Even if firms fully incorporate sustainability strategies into their marketing activities, making sustainable consumption decisions may be challenging for consumers since decisions about buying or not buying eco-friendly products are affected by numerous factors. For marketers, it is important to highlight and understand what factors are affecting consumers' decisions leading to sustainability. By doing that, they may have an opportunity to successfully implement sustainability strategies to attract consumers and reduce the environmental impacts of consumption. However, some consumers might still be hesitant to buy green products and may have difficulty to transform their sustainable consumption attitudes into sustainable consumption behaviors. As discussed briefly before (See Chapter 1.), this problem is defined as the "attitude-behavior gap" in the literature, and it is crucial to examine this gap so that sustainable consumption can be enhanced. Moreover, in order to understand this gap clearly, it is important to understand the process of turning favorable sustainable attitudes into sustainable behaviors in the context of sustainable consumption.

2.2.5. Sustainable Consumption Attitudes and Behaviors

One of the key inputs used by marketing managers to predict future sales and evaluate how strategies marketers use will influence consumer behavior is the attitudes of consumers. Marketers believe that attitudes are strong indicators of how consumers will behave in the marketplace. However, attitudes can fail to anticipate future consumer behavior in the long-run (Morwitz, 2014). For example, consumers might consider replacing their current cars in the next six months, but they can fail to perform buying behavior due to several reasons such as preferring to repair the old car, not having enough money or other changes in personal circumstances. On the other hand, they might have no intention to buy a car but might end up purchasing

a new one. This can happen because they might have a car accident or got a raise and want to replace it with a newer model (Morwitz, 2014). Overall, attitudes are imperfect indicators of consumer's subsequent behavior and marketers need to understand when and how to rely on them.

A widely recognized definition of attitudes states that they are “*learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object*” and can occur under both unconscious and conscious control (Ajzen and Fisbein, 1977). They are learned by being exposed to external stimuli coming from family members, peers, friends, environment, media or other external sources (Aarstad, 2013). Nowadays, people are exposed to numerous external sources about the issues related to sustainability and this exposure should influence pro-environmental attitudes as well as sustainable behaviors. By being exposed to these type of sources, consumers form either favorable or unfavorable attitudes towards sustainability within the context of their lifestyle, values, beliefs, and so on. Belz and Peattie (2013) describe sustainable consumption attitudes as consumer's overall beliefs, emotions, and intentions to engage in environmentally friendly consumption behaviors. According to Panzone et al., (2016), attitudes can help to understand sustainable consumption behaviors and explain why consumer's behave in a certain manner. By categorizing attitudes and understanding what drives consumers negative and positive responses, marketers and policy makers will be able to direct consumers toward sustainable consumption behaviors (SCBs).

Environmental consciousness and concern, moral norms, and the welfare of society are considered among the main drivers and predictors of SCBs (Joshi and Rahman, 2015; Klöckner, 2013). SCBs can be defined as behaviors that aim to reduce resource use, waste, and pollution which are related to three main objectives of sustainability (Williams and Dair, 2007). The concept of pro-environmental behaviors is a long-term approach since it aims to leave a better world for future generations. Besides, it is a holistic approach since it requires the participation of all humanity. When people are adapting more sustainable behavior patterns, they tend to buy products increase the welfare of society and individuals and avoid products

that cause environmental damage. From a sustainability perspective, each and every sustainable consumption behavior has a different level of impact on the environment. A comprehensive study about SCBs by Hertwich and Katzmayer (2004) classifies pro-environmental behaviors under five different categories which are mobility, housing, clothing, lifestyle routines and nutrition intake. For example, acquiring energy-efficient products (e.g., hybrid cars, A+++ white goods), consuming sustainable fashion choices (Carrone, 2020; Song and Ko, 2017), organic food consumption are among the examples of sustainable behaviors (Hughner et al., 2007).

2.2.6. Attitude-Behavior Gap and Factors Affecting SCAs & SCBs

A favorable attitude towards sustainable consumption attitudes is mainly considered as a starting point for the SCBs since, as described above attitudes are assumed to be the main predictors of engaging in a specific behavior. However, studies in the domain of sustainable consumer behavior reflect that frequently, consumers are having trouble transforming their SCAs to SCBs, something called the attitude-behavior gap as discussed previously (i.e., ethical purchasing gap). For example, although more people have become conscious about the environmental impacts of their consumption habits, market share for sustainable products has remained between one and three percent for the entire market (Bray et al., 2011; Morwitz et al., 2007). In order to close the gap, the link between environmental attitudes and behaviors should be investigated thoroughly, because there are many factors that may interfere with the relationship between attitudes and behaviors. Also, understanding how these factors affect the relationship will provide critical insight and importance to comprehending, interpreting, foreseeing, and influencing sustainable consumer behavior.

In order to explain the attitude-behavior gap, many scholars have investigated and conducted a comprehensive literature review on factors affecting sustainable consumption attitudes and behaviors. Research categorizes these factors into distinctive categories, which are individual such as demographics, values, emotions, psychological factors, habits, lifestyle (D'Souza et al., 2007; Joshi and Rahman,

2015), situational and contextual such as price, product availability and attributes, brand attributes, exposure to environmental messages, economic factors, store related attributes (Joshi and Rahman, 2015; Lee, 2010), and social factors which are peer influence, media channels, culture and social norms (Chen and Chang, 2013; Lee, 2010).

What is more, scholars have attempted to use different models developed in previous studies to explain the attitude-behavior gap by identifying the underlying value systems, attitudes, and behavioral tendencies towards pro-environmental behavior. The theory of reasoned action (TRA) and the theory of planned behavior (TPB) which were developed by Ajzen and Fishbein (1980; 1985), are two dominant theoretical approaches applied in many studies investigating SCAs and SCBs (Joshi and Rahman, 2015). According to TRA, attitudes of individuals and social norms are the two main motivations of behavioral tendencies that may elicit behavioral changes. On the other hand, TPB is considered as an extension of TRA and involves an additional motivator which is perceived behavioral control (Joshi and Rahman, 2015). To illustrate, a person might have a high level of ethical values; nevertheless, she might have less money than predicted or be influenced by competing unethical products' promotional strategies while shopping. As a result, she might end up buying conventional products instead of sustainable alternatives. In this case, she might indicate how ethical she is when it is asked, however, she may not engage in sustainable consumption behaviors because of the situational context. For this reason, it is crucial to investigate how situational factors may interfere with this transformation process and affect individuals' behaviors even if they have a high level of sustainability relevant value orientations. Similarly, it is also critical to understand how situational factors may positively influence sustainable consumption.

2.3. Values and Sustainability

2.3.1. The concept of Values and Its Relationship with Sustainability

Values have been at the forefront of many studies in the social sciences since they are crucial for explaining the motivations that serve as a guiding principle in a person's attitudes, norms, thoughts, and behaviors. Values are identified as guiding principles, important life objectives, or standards. It is also proposed that values establish ideologies, attitudes, and behaviors (Rokeach, 1973; Schwartz, 2012; Tuulik et al., 2016). Based on these definitions, values can be considered as criteria which people use to justify their actions. Kahle (1996) emphasized that values are shaped through personal experiences and meanings acquired during the learning process. Each person holds several values with varying levels of importance and a specific value might be important for one person; however, the same value may be totally unimportant mean anything to another person.

Many researchers have attempted to understand and explain the value systems of individuals. For example, Rokeach (1973) categorized values into two groups which are terminal and instrumental. Terminal values are described as the life goals a person wishes to attain during the lifetime, whereas instrumental values are considered as modes of behavior to succeed that life objective (Tuulik et al., 2016). Those two value systems represent two separate yet functionally interconnected systems, meaning that all the values interested in modes of behavior are considered instrumental in obtaining terminal values. Moreover, adopting only one modes of behavior can be instrumental to the attainment of various TVs or vice versa. For example, a person may wish to have a comfortable life as a self-focused end state while he might acquire hard-working and being responsible as instrumental values in order to reach that goal.

Despite the complex nature of value systems and individual differences, Schwartz (1992) identified a few main characteristics of values. According to Schwartz (1992), values reflect individual beliefs and imply desirable life goals which may trigger certain behaviors to pursue these goals. They predominate over specific actions and situations, which distinguishes values from other concepts such

as norms and attitudes. Another distinguishing yet common characteristic of values is that they constitute a hierarchical order, meaning that one value can be more important than another. Also, values are effective during the selection or evaluation of action or event since they serve as a standard or criteria. These features characterize all values; however, each value expresses a different type of motivation or objective which helps to discern one value from another. In order to identify personal values that are influential across cultures and can help to explain diversity and conflict in values, Schwartz (1992) proposed the Theory of Basic Values and described ten values which are considered universal. Since values are activated with motivational goals, Schwartz concluded that basic human values should be derived from three main categories, which are biological needs of an individual, social needs, and welfare needs of the belonged group. In his work, he stated that values establish a motivational continuum providing a circular structure and he emphasized that any of the two values in the circle which are close to each other have similar underlying motivations. On the other hand, the values contradict each other if they are more distant (See Figure 2.2.).

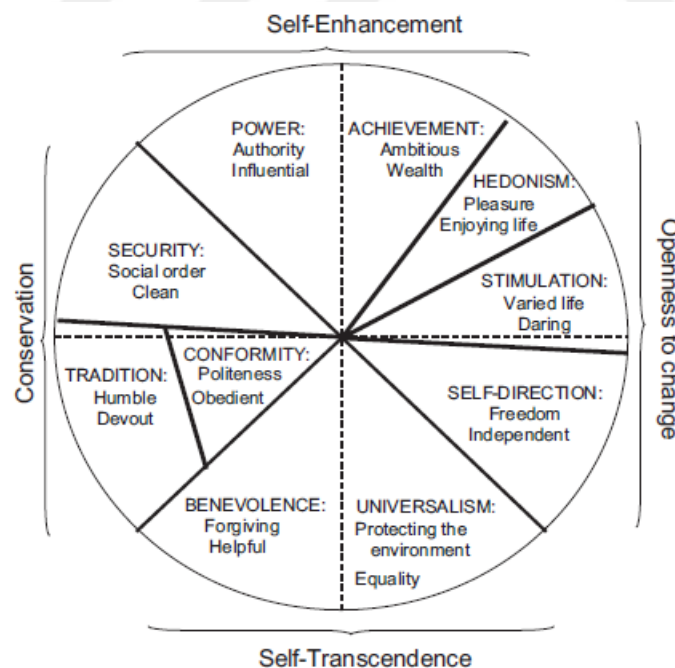


Figure 2.2: Theory of Basic Values: Adapted from Maio et al., (2009)

Schwartz's Theory of Basic Values has been used extensively in consumer behavior to examine the relationship between values, sustainable consumption attitudes and behaviors. One of the reasons is that he uses two-bipolar dimensions where the first dimension is the openness to change–conservation while the second dimension is self-transcendence and self-enhancement. The first dimension captures the conflict between values that rise importance to “independence of opinions, actions, and emotions for change” and “resistance to change”. On the other hand, the second dimension distinguishes values emphasizing “well-being of others” and “caring for personal interest, success and dominance over others” (De Groot and Steg, 2007; Rickaby et al., 2020; Schwartz, 2012). Especially the second dimension has caught the attention of scholars studying SCAs and SCBs because with globalization, cultures have started to change, and people have become more individualistic. This has led to being isolated from society and a lack of solidarity (Salonen and Åhlberg, 2013). As a result, consumers do not require any external help from the community to satisfy their basic needs and begin to enjoy achieving high living standards. Additionally, De Groot and Steg (2007) state that especially the self-transcendent (i.e. biospheric and altruistic values) vs. self-enhancement (i.e. hedonistic and materialistic values) dimension relates to sustainable consumption attitudes and behaviors since pro-environmental behaviors often involve a conflict between immediate personal benefits and long-term collective interest. Specifically, personal values such as universalism, altruism and benevolence were determined to be positive drivers of SCAs and SCBs whereas hedonism and materialism had a negative and weak relationship between environmental attitudes and behaviors (Eze and Ndubisi, 2013; Şener and Hazer, 2008). Since these two value systems are strongly correlated with sustainability, our research focuses on those two value systems in order to investigate sustainable consumption attitudes and behaviors. In line with that, the next chapters of this thesis will provide information about these two value systems and how they relate to sustainability.

2.3.2. Materialistic Value Orientations and Sustainability

Materialism has been widely investigated in various fields such as religion, philosophy, and sociology. For the last decades, it has been addressed in marketing

and environmental psychology literature. Materialism is a prominent feature of today's consumer society since materialist people tend to perceive acquired goods not only an end result, but also as a tool to ensure their happiness, success, and power. Many consumers embed materialism into the foundations of their consumption habits and, as a result of this, marketers have started to use the materialism concept as a segmentation variable (Maher and Hu, 2003).

Materialism has been described from different perspectives throughout the years since it has connections with many fields. According to Ward and Wackman (1971), materialism is a tendency to use money and material goods to reach happiness and social acceptance. Belk (1985) describes materialism as "*the importance a consumer attaches to worldly possessions*" and states that materialistic values are placed at the central point of individuals' lives by offering a substantial amount of satisfaction and dissatisfaction. Ashikali and Dittmar (2012) append this definition by conceptualizing materialism as the desire for a conspicuous lifestyle associated with image, reputation, and success with the emphasis on wealth and possessions. Furthermore, Richins and Dawson (1992) regard materialism as an individual value and define it as "*set of centrally held beliefs about the importance of possessions in one's life*". Overall, the common theme that can be derived from these definitions of materialism is how individuals describe the relationship they established with possessions and how they consume those possessions.

Belk (1985) states that materialism evinces three personality traits which are:

Possessiveness: commitment with objects, urge and disposition to sustain control or ownership over one's possessions

Nongenerosity: Reluctance or unwillingness to share possessions with others

Envy: Desiring for someone else's happiness, success, and possessions

Belk (1985) conceptualizes materialism as a personality trait and focuses on one's behavior, whereas Richins and Dawson (1992) specify it as a value system by focusing on possessions. They argue that materialistic values serve as guiding principles of one's choice that apply to different situations including consumption

arenas. Materialistic values will influence the type and quantity of goods purchased since people who have a high level of materialistic values will have different consumption patterns than those who have a low level of materialistic values. Richins and Dawson's (1992) approach to materialistic values is evinced in three dimensions in individuals overall value system:

Acquisition centrality: Materialistic people place possessions and acquisitions at the focal point of their lives. Acquisition centrality implies a lifestyle where a high level of material consumption serves as a goal and administers a set of plans.

Happiness in acquisition: Pursuing happiness, satisfaction, and well-being in life through material consumption.

Possession-defined success: People who have higher materialistic values tend to measure happiness and success by the number and quality of possessions accumulated.

Furthermore, other researchers also employ Rokeach's (1973) approach towards various value systems and define materialism as terminal and instrumental values. Csikszentmihalyi and Rochberg-Halton (1981) differentiate two concepts (instrumental and terminal values) for materialistic values and state that the instrumental dimension of materialism implies acquiring things as means to procure an end-state (for example, buying a gift to establish a friendship). Further, they describe terminal materialism (end-state) as consumption and consumers who hold terminal materialistic values will consume symbolic goods to provide status while show obsessiveness towards the greed of consumption. Most of the time, these individuals feel unsatisfied with their current lifestyle and feel helpless. As a result, their consumption behavior will be motivated to fix their well-being. Additionally, people who possess high materialistic values will have high expectations from material possessions. Consequently, unattainable desires and aspirations will make it hard to obtain satisfaction from acquired goods compared to nonmaterialistic people (Richins and Dawson, 1992; Sirgy, 1998; Lee and Ahn, 2016). Maher and Hu (2003) mention that most of the studies examining consumption behaviors implement and study terminal values as their methodologic approach and report

various outcomes of materialistic values. Rather than consuming with a sense of autonomy and carefully engaging in the decision-making process, materialistic people will end up losing control over their consumption behaviors (Lee and Ahn, 2016). Overall, this lack of sense and control over the consumption will lead to diminished well-being (Richins and Dawson, 1992), overconsumption (Zinkhan, 1994; Sharma and Chandni, 2017), being unsatisfied with life (Belk, 1985; Richins and Dawson, 1992), and lack of concern for the environment (Kilbourne and Pickett, 2008; Sharma and Chandni, 2017; Shukor et al., 2017).

Strizhakova and Coulter (2013) report that materialistic people are less aware of the environmental impacts of their purchasing decisions. Most of the time, environmental protection is not among their purchasing criteria while evaluating alternatives since they are looking for symbolic meanings in possessions. Kilbourne and Pickett (2008) examined the relationship between materialism, sustainable beliefs, environmental concern, and behaviors. Their results demonstrate a negative relationship between materialism and environmental behaviors which are shaped by sustainability concerns and beliefs. The key supporting argument in their model is that materialistic people can be in a state of cognitive dissonance if desirable consumption behavior causes negative environmental impacts. In that case, the incongruity between materialism and sustainable behavior can be resolved in favor of materialism, meaning that the individuals may ignore the environmental information conflicting with materialistic values in order to preserve their self-image (Kilbourne & Pickett, 2008). Similarly, Polonsky et al. (2014) also attempted to explore the connection between dominant social paradigm⁴, materialistic values, sustainability concerns, and intention to behave more sustainably by using data obtained from Asian consumers. They state that although there are common macro-institutional structures to all societies, each society and consumer will have different

⁴ The dominant social paradigm defines the fundamental belief structures of the society which influence the way people comprehend and interpret how the world around them functions (Gollnhöfer and Schouten, 2017; Milbrath, 1984). Perlmutter and Trist (1986) further state that social construction formed by dominant social paradigm is so widely held by individuals and it subconsciously affects their behavior by providing a certain direction. It stimulates hyper-consumption and assumes that happiness and satisfaction can be achieved through increasing level of consumption which conflicts with sustainability (Gollnhöfer and Schouten, 2017; Kilbourne et al., 1997).

value systems and interpretations of the world which will influence the dimensions of their behavior. For example, in Western societies the individual is perceived as an independent entity without forming strong ties to the community, whereas in Eastern societies, individuals adopt more a collectivist approach and ties to one's community are more significant and important (Ralston et al., 1997). A desire to comply with society would influence consumer attitudes and behaviors including their relationship with the environment. In their study, they hypothesize that dominant social paradigm will have a positive correlation with materialism which is negatively associated with environmental concern. In their study, they obtained multi-national data from four Chinese-speaking Asian economies and discovered that underlying mechanisms of dominant social paradigm (i.e., economic, political, and social) are positively affected by the success dimension of materialism. This finding implies that if more people believed in individualism, economic growth, and technological advancements, then their materialistic values will be higher for success which is negatively correlated with sustainable concerns. They state that people are less likely to reduce their consumption activities to protect the environment under the influence of materialistic values. Other literature findings also indicate a negative relationship between materialism and sustainable attitudes and behaviors (Good, 2007; Kilbourne et al., 1997; Kilbourne and Pickett, 2008; Lee and Ahn, 2016; Polonsky et al., 2014; Sharma and Chandni, 2017; Shukor et al., 2017; Strizhakova and Coulter, 2013).

Self-enhanced people have high motivation to consume products that will provide status, power, and greater satisfaction. Since green products are mainly associated with being inconvenient, expensive, and offering diminished performance, self-centered people are not willing to sacrifice in their consumption habits (Ottman et al., 2006). As a result, self-enhanced people are intensively engaging in status and self-enhancing activities (Naderi and Strutton, 2015) They also tend to choose products that will provide status, prestige, and reputation. However, they state that if green options are marketed as “admirable” and “worthy of respect”, then materialistic people might prefer greener options because green products might offer some level of recognition and respect in the society which materialists are striving for. In order to explore this theory deeply, they conducted a

set of experiments. In their first experiment, they investigated the relationship between self-enhanced people and certain pro-environmental behaviors by considering recycling, energy-saving and willingness to pay extra for green products to protect the environment. The result revealed a negative and significant relationship between materialistic values and sustainable behavior ($p < .001$). In a consequent experiment, they manipulated product visibility and attempted to investigate whether people who have a high level of materialistic values would prefer green products. Harbaugh (1998) suggests that motivation for status led people to be affectitious about their behavior when it is observable. Naderi and Strutton (2015) had applied Harbaugh's theory in their study and proposed that materialistic people would prefer sustainable products if product visibility is higher. In their experiment, the conventional product was described as superior on luxury and had better performance, whereas sustainable option has superior sustainable aspects. At the end of the experiment, they found that materialistic people would perceive green products attractive when it is visible. For non-materialistic people, attractiveness towards the green product does not differ whether visibility is high or low. This finding suggests that if performing sustainable behavior is in the public eye, then materialistic people may be more likely to choose greener options since they have a desire to impress others by their purchasing decisions. On the other hand, other self which self-transcendence will lead consumers to perform sustainable consumption patterns without requiring visibility. People who possess values which give emphasize to self-transcendence such as altruism will favor sustainability more compared to individuals who have high level of materialistic values. The next section of this thesis will explain how altruistic values relate to sustainability in more detail.

2.3.3. Altruistic Value Orientations and Sustainability

The concept of altruism has been used interchangeably in social sciences by philosophers, biologists, economists, sociobiologists, and social psychologists. Due to this, attempts to define altruism from acquiring a single point of view is perceived as problematic since the literature is full of various explanations from different disciplines. From the view of evolutionary biologists, altruism is observed when a specific behavior benefits the recipient at an individual cost to an actor (West et al.,

2006). Likewise, sociobiologist Margolis (1984) defines altruism as the allocation of resources that is influenced by the impacts of an actor's choices both on society and others. Also, he extends this definition by explaining altruistic behavior, and states that the actor might have done better if he was able to ignore the impacts of one's choice on other people. However, by accentuating the cost-benefit relationship to define altruism, it can lead to misleading interpretations and judgments because individuals may require paying a small cost; however, the reward that people obtain by performing altruistic behavior might be much more or vice versa. Also, being focused on the cost of performing altruistic behavior to the actor or benefits to the recipient, these definitions may fail to address underlying motivational factors while defining altruistic acts.

Bar-Tal (1986) emphasizes that motivation is one of the crucial factors which provide a moral nature to the altruistic act. He states that there are common motivations that can be observed in most of the altruistic acts. These motivations emphasize that "altruistic behavior i) must benefit others, ii) the benefit must be the goal by itself, iii) must be carrying out voluntarily, intentionally, and without expecting any external rewards" (Bar-Tal, 1986, p.5). Overall, if the action appears to be motivated mainly to benefit others' needs and well-being rather than one's own, then this behavior is called altruistic. By reviewing the existing literature findings on altruism, Büssing et al. (2013, p.336) define altruism as an "*attitude and commitment to help and care for others without expecting any rewards or direct benefits*". Similarly, Hoffman (1979) claims altruism as an act of helping or sharing which will enhance the welfare of other individuals without conscious regard for a person's own self-interest.

As stated earlier, Schwartz's TBV of self-focused bipolar dimension suggests that there is another self which focuses on the well-being of others rather than being interested in individual satisfaction. One of the values that are included in the self-transcendence dimension is altruism. Unlike self-enhanced values, values that prioritize self-transcendence can lead to positive attitudes towards sustainable behaviors. Previous literature findings also demonstrate that people who strongly

affirm values reflecting altruistic motivations are more likely to engage in sustainable behaviors compared to people who are self-oriented (De Groot and Steg, 2007; Dickson, 2000; Geiger and Keller, 2017; Haws et al., 2014; Hopper and Nielsen, 1991; Song and Ko, 2017; Steg et al., 2014).

Schwartz's theory of altruistic behaviors (1977) stipulates that personal norms are considered among the main drivers of helping behavior. What this means is, personal norms serve as self-based standards for helping behavior constituted from internalized values during the altruistic behavior process (Schwartz and Fleishman, 1982). What is more, compassion is defined as a concern for others' suffering. It requires empathy and emotional response that will prompt subsequent helping behavior to alleviate the pain and suffering of others (Büssing et al., 2013). Based on this, it can be concluded that compassion is one of the substantial prerequisite elements for altruistic acts eventuating from empathy for a person in distress.

Before the relationship between altruism and sustainability was explored in both consumer and environmental psychology research, altruism was widely used to investigate prosocial behaviors⁵ of individuals including blood donation (Steele et al., 2008), volunteering (Haski-Leventhal, 2009), and cooperating (Simpson and Willer, 2015). In some of the studies that are conducted to establish a relationship between prosocial behaviors and altruism, compassion is used as a motivating factor to explain an individual's prosocial tendencies to eliminate the suffering of others. Similarly, other researchers studying environmental psychology conceptualized compassion as a fostering factor in sustainable attitudes and behaviors (Büssing et al., 2013; Pfattheicher et al., 2016; Song and Ko, 2017). While investigating the relationship between altruism, SCAs, and SCBs, scholars investigated specific sustainable behaviors relating to altruistic values such as recycling (Hopper and Nielsen, 1991), engaging in sustainable fashion consumption (Geiger and Keller, 2017), and supporting activist campaign (Balanli and Hesapci, 2014).

⁵ Prosocial behaviors include various range of actions which will attempt to improve one or more people well-being other than oneself (Batson and Powell, 2003).

Altruistic concerns lead to supporting ethical sourcing (*ex. fair trading*) and people having these concerns tend to purchase products from ecologically and sociologically responsible organizations (Dickson, 2000). People who are altruistically oriented have a significant level of concern for others. As a result, they are more careful in their purchasing decisions and consider negative impacts of their purchasing habits on the environment since environmental problems affect other people (Schultz et al., 2005). Büssing et al. (2013) state that altruistic people have an intrinsic motivation to elevate other's well-being; in turn, they are likely to purchase sustainable products.

Consumers with stronger green values like altruism tend to be attentive users of physical resources meaning that they use products through the whole lifecycle and only consume the necessary amount of products to make them perform efficiently (Lastovicka et al., 1999). Also, while making purchasing decisions, they consider equitable use of natural resources so that everybody can access them in a fair way. By doing so, they try to assist people in need, which indicates altruistic value orientations. If altruistically-oriented consumers believe that environmental problem exists, then they voluntarily tend to adopt sustainable behavior patterns in order to eliminate the problem to protect others without expecting any rewards (Dickson, 2000). For example, Hopper and Nielsen (1991) claim that recycling is considered as an altruistic behavior because recycling is perceived as costly since it requires time and energy to sort, collect, and deliver recyclable products and materials. On top of that, immediate effects on the environment are not observable in a short period of time and there are no individual rewards for that specific sustainable behavior for individuals although recycling benefits society and the environment as a whole (Hopper and Nielsen, 1991). However, in order to alleviate environmental pollution and promote effective use of natural resources, recycling is crucial in achieving a sustainable future.

To establish the relationship between altruism and pro-environmental consumption attitudes and behaviors, several researchers also examined the sustainable fashion choices of consumers. While examining these relationships,

scholars incorporated ecological and social aspects of sustainability by using various terms such as “organic, biodegradable, eco-labeled” for ecological issues, and to highlight social issues “fair trade, sweat shop free labor, and locally-produced” terms have been used (Song and Ko, 2017). For example, while shopping for clothes, altruistic people are likely to choose sustainable fashion products. By engaging in sustainable fashion consumption⁶, they believe that their choices can alleviate people’s pain who have dangerous and inadequate working conditions in underdeveloped countries (Geiger and Keller, 2017; Song and Ko, 2017). Also, Geiger and Keller (2017) claim that ecologically conscious fashion consumption shares common features with other types of pro-environmental behaviors such as consuming less, buying high-quality items to increase product life cycle while it activates compassion which evokes altruism. In their study, to activate altruistic values, participants were presented with two different images (*homeless man* x *severely ill child*) and were asked to indicate their willingness to pay extra for Fair Trade labeled⁷ clothes. Presenting these pictures successfully activated altruistic values and the urge to help others. As a result, a large majority of participants (91.4%) indicated their willingness to pay for sustainable fashion clothes 52.5% more than the original price.

Similarly, past research has examined consumers’ willingness to pay (WTP) for fairly traded products by using a specific product which is a coffee⁸. By being ranked

⁶ The fashion industry is being accused of causing many environmental and societal problems starting with the production process (such as spinning, weaving, excessive use of pesticides and chemicals etc.) tailoring, distributing, and retailing. These activities lead to energy waste, greenhouse gas emissions, and waste generation. As social issues, people working in the garment industry suffer from dangerous working conditions, lack of security and health conditions, human right violations, banning of trade unions and long working hours. In order to alleviate people working under those conditions, a concept called “sustainable fashion consumption” has emerged and it is defined as “*individuals act of purchasing, consuming and disposing of clothes that do not jeopardize ecological and social conditions of all people to satisfy their needs*”(Geiger and Keller, 2017, p.1124)

⁷ Fair-trade Label is an authorized quality label which guarantees that a specific product is manufactured by complying with ecological and social standards during the production process and international trading. (Geiger and Keller, 2017)

⁸ Coffee production involves ecological and social aspects during the production process which arouses sustainability concerns. Especially, coffee producing countries are mainly poor and underdeveloped countries and coffee is mainly consumed in developed countries which increases the carbon footprint through value chain process. Most of the workers suffer in the coffee industry from dangerous working conditions (Maaya et al., 2018). Moreover, annual coffee production accounts to about seven million metric tons and in order to meet demand, ineffective management of natural

as the world's second most widely traded commodity, coffee is also considered a pioneering industry for sustainability certification. Also, sustainably sourced coffee includes two identical labels of fair trade and organic label. They are widely recognized by sustainability conscious consumers since they are widely used in eco-friendly products and help consumers during the purchasing decision making process by providing information (Maaya, et al., 2018). Fair trade label indicates helping less-fortunate people in distant places by promoting social development where products are originally manufactured (Becchetti and Huybrechts, 2008) while organic label guarantees that commodities are produced in conditions that enhance sustainable resource use, healthy lifestyle, animal welfare, and environmental protection (Lockeretz, 2007). Maaya et al., (2018) investigated the effects of altruism on consumer's WTP for sustainable coffee products by providing different attributes such as taste, country origin, price, and existence of fair trade/organic labels. Their results demonstrate that altruistically oriented people pay extra attention to those labels while shopping and altruistic values are significantly correlated with consumer's WTP extra for sustainable labels. The fair-trade label represents altruistic people's motivation to help others while the organic label highlights underlying pro-environmental attitudes and behaviors towards the environment. Similarly, other scholars have reported significant relationship between the effects of altruistic values on sustainable consumption attitudes and behaviors by examining consumer's WTP for sustainable products. (Husted et al., 2014; Lusk et al., 2007; Umberger et al., 2009).

Previous literature findings showing the strong relationship between values and sustainability are well documented. Values not only help individuals to evaluate situations and determine their position towards sociological, ideological, and environmental issues but also assist individuals to reach a desired end state. Specifically, if people are more oriented towards self and acquire goods to enhance themselves, then they may act solely based on their wishes and desired ends and ignore environmental impacts of their decisions. On the other hand, if individuals

resources leads to deforestation and unsustainable practices through the entire supply chain (Murthy and Naidu, 2012).

are concerned about others' wellbeing, they tend to perform behaviors that will provide satisfaction through benefiting others. Those two versions of self which give emphasis to materialistic and altruistic values are considered among the main drivers and predictors of sustainable consumption attitudes and behaviors. However, a serious limitation with studies conducted in environmental psychology is that they disregard the fact that values and the expression of behaviors are also being influenced by the context of the situation.

Mainly, consumer researchers integrated in sustainability have examined factors that do not change by the situation such as consumers' demographics, personality traits, values, and so on to explore their influence on SCAs and SCBs. On the other hand, literature findings reveal that people's value systems may be influenced by situational context. For example, Ye and Ng (2019) discovered that if people are primed with different cultural concepts, then they are likely to change their personal values under different cultural identities to improve subjective well-being and fit in the society. However, only a few researchers in environmental psychology have tried to understand how situational context may elicit changes in sustainable attitudes and behaviors (Good, 2007; Mazar and Zhong, 2010). People are not always driven by their enduring value systems and, especially brands provide situational cues that affect consumption decision-making process to influence subsequent behaviors. As a result, consumers may follow consumption patterns that are different from their typical values, norms and goals. To help fill this research gap, this thesis reviews the relevant literature on the priming methodology which influences people's attitudes and behaviors by being exposed to certain stimulus under situational context. By doing so, the goal is to demonstrate how a stimulus given in the situational context can influence consumers' decisions and what are the implications for the sustainability. In line with that, next sections will provide information about priming methodology and then will specifically focus on the brand priming effects.

2.4. Priming Theory

This section of the thesis will explain what priming is, beginning with a discussion of memory systems in order to explain how individuals' behaviors are

formed. Lee (2002) states that memory is an important element because it stores multiple representations which guides people while forming behaviors. Moreover, depending on the task, multiple representations in the memory can activate different memory systems. Because of this it is important to highlight identical differences in human memory systems. In this study, we aim to provide the distinction between memory systems by focusing on explicit and implicit memory. In line with that, the next section of this thesis provides information about two human memory types: explicit and implicit memory.

2.4.1. Memory Systems and Priming

As human beings, do we always know the reasons for our actions? Can our actions be influenced by stimuli that we have been exposed to recently without realizing this influence? Or is it possible to evaluate our choices objectively without being influenced by outside factors? To answer such questions, the nature of human memory systems, how these systems interact with each other, and factors influencing people's behavior have been at the forefront of research in the field of cognitive and neuro psychology, since it provides an opportunity for researchers and policy makers to have a better understanding of behavioral processes of individuals (Schwartz and Fleishman, 1982; Tulving and Schacter, 1990). In order to analyze such systems, scholars have hypothesized that human memory is formed by a number of working systems that have diverse working characteristics. How these systems differ from each other is one of the main interests in many studies (Jacoby and Witherspoon, 1982; Johnson, 1987; Schacter and Buckner, 1998; Schwartz and Fleishman, 1982; Squire, 2004; Squire, 1992; Tulving and Schacter, 1990). Researchers have identified two types of memory systems: explicit and implicit memory which help researchers to identify differences between multiple memory systems (Schwartz and Fleishman, 1982; Squire, 1992; Tulving and Schacter, 1990).

Explicit and implicit memory reflect distinct neural processes and show a different state of awareness while guiding a behavioral process. Schacter (1990;1992) claims that the difference between explicit and implicit memory can be identified as the difference between conscious and unconscious memory. Explicit

memory (aka. declarative memory) is defined as the sum of recollected memory that only includes the intentional and conscious actions of individuals. This type of memory helps individuals to acquire information through facts and events. On the other hand, implicit memory refers to performance change in behaviors that are formed by previous experiences of a task that do not involve consciousness recollection of related experiences. Also, unlike explicit memory, implicit memory does not require a sense of recall (Schacter, 1992). These abilities enable the development of new skills and habits by forming cumulative changes in response systems of individuals through conditioning, priming, habit, and nonassociative learning (See Figure 2.3.). Another distinctive factor between implicit and explicit memory is that they activate different divisions of the human brain. While declarative memory uses the hippocampus which has a primary role in learning and forming memories to form reactions, nondeclarative memory uses the amygdala which provides sense of familiarity about the past (Squire, 2004). Schacter (1987) states that memory systems which involve descriptive concepts are mainly concerned with individuals' psychological experience during the retrieval process, while different types of memory systems are activated when the task requires recollection of conscious and unconscious memory.

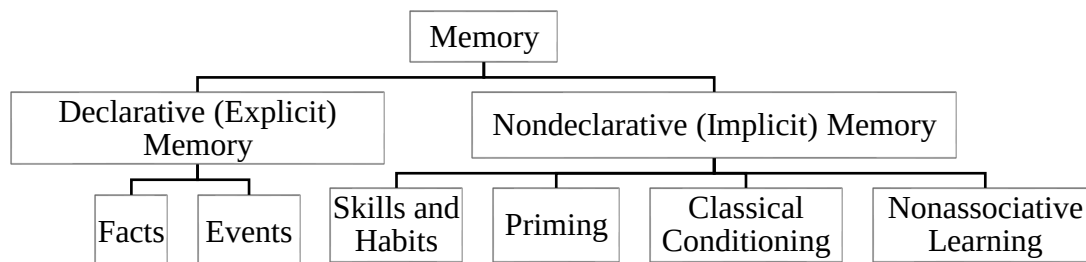


Figure 2.3: Classification of memory. Adapted from (Squire, 2004)

While examining cognitive representations behind specific attitudes and behaviors of individuals, researchers use various methods to study the link between environmental cues and psychological reactions so that they can have a better understanding of human memory systems. One of the well-known research methods that use environmental cues to activate implicit memory is called *priming*. The

priming term has caught attention in the psychological literature and described in various ways. In general, priming is defined as the “*facilitative effects of the stimulus on a subsequent associated attitudes and behaviors*” (Tulving, 1983). One of the widely used definitions of priming suggests that it is concerned with the perceptual interpretation of objects and words that have been recognized separately from other types of memory systems (Tulving and Schacter, 1990). Schacter (1992) supports this definition and adds that priming may occur independently from any kind of conscious recollection of previous experience with a stimulus. Moreover, the priming effect facilitates memory processing while changing the response towards a stimulus by exposure. However, it can also lead to error-prone reaction and slow down the response processing time because distractor stimuli requires more time to extract irrelevant items before leading to target items (Neumann and DeSchepper, 1992).

Effects of priming on an individual’s behavior is measured with experimental tasks that do not require conscious recollection of previous experiences (Schacter and Buckner, 1998). This measurement method gives distinctive characteristics while conducting priming studies from traditional tests of recognition and recall which are used in studies investigating explicit memory. Mainly, priming studies consist of two stages. At the first stage of the experiment, participants are exposed to a stimulus, such as word puzzles, word stem completion, story reading, line drawings, etc. (Squire, 1992). At the second stage, which can be given either immediately or after some time, participants are presented with test items that measure the influence of priming on some subsequent behaviors. For instance, in a prototypical example where priming is measured with a word-stem completion task where participants are given the first letters of a word and asked to complete the word, at the beginning of the experiment, participants study a series of words. After being exposed to certain words, subjects are given a task that requires them to complete each stem with words that first come to their minds (Schacter and Buckner, 1998). The goal of such research is to show how priming can influence the way people behave without them being consciously aware of this influence. Subjects might, for example, when primed with words about dogs, complete the word task

with dog related words. Similarly, in another priming study, researchers may expose participants to a series of words by flashing them briefly and then ask participants to identify words. In order to conduct priming research properly, Janiszewski and Wyer (2014) state that there are several factors to which researchers need to pay attention. First of all, prime stimulus and target stimulus should be clearly defined during the research development process to increase the effectiveness of priming. Then, the prime stimulus should have an influence on the target stimulus to alter judgments. Also, a response to a stimulus should not be permanent. Lastly and most importantly, the priming effect should occur unconsciously and individuals should not be aware of the priming effect (Bargh and Chartrand, 2000). If participants are aware of the priming effect, then they might try to correct their answers based on the primed context where it could lead to a biasing effect (Janiszewski and Wyer, 2014). If all stages are successfully applied during the experimental study, priming can influence whole stage of information processing and in turn the primed content may influence subsequent behaviors.

2.4.2. Types of Priming and Effects of Priming on Behavioral Decision-Making

Priming is considered fundamental in both cognitive and social psychology since it provides a powerful explanation for factors influencing individuals' present and future behaviors. The priming effect can be investigated in many forms from activating related concepts to enhancing associated goals for specific behaviors. For instance, social psychologists use the priming method to understand how mental representations are being influenced, whereas cognitive psychologists use it to investigate the structure of knowledge representations (Molden, 2014). Both fields use similar methods to study the priming effect on an individual's behavior; however, the diversity of priming tasks used in studies has led to various classifications in an attempt to clarify the nature of priming in various tasks.

One of the widely used types of priming in social psychology research is semantic priming, which means that the priming effect is created by true relations of the meaning of words or pictures (Bargh and Chartrand, 2000; Kim et al., 2014;

McNamara, 2005). Semantic priming mainly uses lexical decision tasks in which a prime stimulus consists of either properly spelled words or nonwords in which letters are strung meaninglessly. The main idea in semantic priming is that if two objects are similar to each other, then they will be processed at the same level by either contradicting or assisting each other. If not, then they won't have any effect (McNamara, 2005). Moreover, if people are exposed to semantically related stimulus-response pairs (e.g., bread-butter), the target stimulus will occur in the favor of the preceding stimulus. To illustrate, if an individual is exposed to an item in the same category (e.g., dog), then the stimulus will unconsciously lead to activation of related concepts (e.g., wolf). It also increases the speed and accuracy of response to a stimulus by presenting a related picture because the stimulus will activate related concepts in the memory (Harley, 2001).

Alternatively, conceptual and perceptual priming is when manipulations are used to influence mental representations in the memory. In this way, participants are unaware of the actual relation between prime and target stimulus (Bargh and Chartrand, 2000). In conceptual priming, the priming task must involve the concept and relation without revealing the connection between stimulus-response pairs. Also, a conceptual network is formed based on semantic similarity while assessing the priming effect. Examples of such research are trait concept priming studies in which participants have been exposed to concept relevant information (Bargh and Chartrand, 2000). Moreover, conceptual priming may affect the performance of a subsequent task. To illustrate, if people are exposed to the word "honest", then their subsequent behavior is followed by being honest. On the other hand, perceptual priming utilizes an advanced presentation of the physical attribution of a stimulus to influence the target stimulus rather than using conceptually related pairs sharing the same category. In perceptual priming, primes that have similar shapes or forms are used to assess priming effect (Matsukawa et al., 2005). To exemplify, the word coffee has both conceptual and perceptual properties. The dark brown color, the fluidity, and its bitter taste are among physical properties which emphasize perceptual priming. Whereas there are other properties of coffee which form based on individuals' knowledge like the roasting process as well as, containing chemical

substances like caffeine etc. These different kinds of properties (conceptual and perceptual) contribute to the formation of semantic representation of coffee in the memory (Schreuder et al., 1984). This example also asserts that there are no strict rules while choosing an appropriate priming technique during the research design process. Scholars might choose to combine different priming types (e.g., conceptual-semantic, perceptual-semantic) that will best fit according to research purposes.

As stated earlier, priming also influences and alters the way people behave by enhancing different cognitive constructs through exposure to a stimulus (Krupan, 2017). In line with this understanding, behavioral priming is related to how an external stimulus (e.g., a list of words defining a healthy lifestyle) facilitates associated mental representations (e.g., being healthy) which in turn affect observed behavior without the persons' of being influenced by the stimulus awareness. One well-known study in the priming literature which is conducted by Bargh et al. (1996) shows that mere exposure to a stereotyped trait construct is sufficient to facilitate behavioral effects in line with the information associated with the stereotype. To illustrate, in their study, participants were asked to complete a scrambled-sentence priming task as a part of a "proficiency test". The task consisted of elderly stereotype-relevant words by referring to slowness which is associated with being elderly. On the other hand, other participants in the experiment were given age-non-specific words in the priming task. Their results demonstrate that people who were exposed to the elderly stereotype walked more slowly than compared to others who are not exposed to age-specific words. This result shows that if people are primed with an appropriate stimulus which hints at specific actions, then the corresponding behavior should be influenced by the primed concept.

Goal priming also demonstrates that a stimulus in the environment can elicit goal-driven cognition without the need for conscious awareness (Papies, 2016). Earlier studies conducted in cognitive psychology illustrate that goals associated with motivational rewards can provide effective motivations for pursuing them. Strong associations between a goal and positive outcomes can alter behavioral responses through goal priming (Papies, 2012, 2016; Papies and Hamstra, 2010;

Takarada and Nozaki, 2018). For example, if a woman wants to lose ten pounds to reach her ideal weight, then she might have a discrepancy between her current eating habits and dieting goals. By being primed with the concept of “diet”, she can engage in a healthier lifestyle and should be likely to try to eat less. If she is currently at her ideal weight, then priming with the diet concept will be ineffective and change in behaviors will not be observed (Fitzsimons et al., 2008). Thus, goal priming may not have any influence on an individual’s behavior if there is no incompatibility between one’s current and desired end states.

To summarize, research on priming reveals that attitudes and values are activated as a result of mere exposure to specific stimulus without awareness and consciousness (Bargh et al., 1996), and subsequent to this exposure, these attitudes and values exert influence on individuals’ behaviors. Different types of priming methods are used to influence individual’s behavior according to research purposes. Literature findings reveal that attitudes and values are triggered automatically if people are exposed to certain stimuli in the environment, as it is more likely to influence behavior toward the stimulus. What is more, priming is also utilized frequently by marketers to influence consumers’ behaviors. It could be either manipulating a picture in the advertisement to prime emotions or use of symbolic cues which may emphasize hedonic values. For this reason, it is crucial to establish the relationship between priming and consumer behavior, as it is one of the primary method used in this thesis study. In this regard, the next section will attempt to establish this relationship by mentioning previous research.

2.4.3. Priming and Its Relationship with Consumer Behavior

The consumer decision-making process is driven by mental processes that occur consciously and unconsciously. To explain the difference between conscious and unconscious choices of the consumer, Dijksterhuis et al. (2005) provides a real case scenario about a person who is navigating through aisles while shopping. They state that if people are asked to explain their purchasing choices, then they might struggle to explain each product that they dropped in their shopping cart. For some items, it is easier to explain but it is not the same for all. For instance, one might be out of

washing detergent and may have a job interview the next day. For the interview, one must wash a shirt and consciously the person picked a washing detergent. However, for some choices, it might be hard to explain. For example, a person might see a bar of chocolate at the cash register and experience a fleeting moment of awareness (“Oh yes, chocolates!”) which leads to impulse buying. During the time spent in the market, the individuals’ consciousness was mainly occupied with things other than buying a chocolate. Before purchasing something, engagement in information processing takes place such as searching for information, evaluating brands, and deciding on an item (Petty et al., 1983). This process eventually transforms into attitudes, and those attitudes shape consumer’s purchasing behaviors. For example, when a store uses the “today only” phrase in its advertisement, consumers are more likely to run to the store and purchase goods because people believe that what is scarce is good. However, when consumers are asked why they bought that product, they might struggle to justify their purchasing behavior. This happens when information processing is either minimal or hardly existent during shopping (Petty et al., 1983).

Some consumer buying decisions do not necessarily entail extensive information processing and consumers may end up purchasing products on impulse. These decisions may be influenced by subtle cues in the environment that may guide consumer’s buying behavior. To illustrate, a study conducted by North et al. (1997) demonstrates that the store atmosphere influences product choices. In their study, they played stereotypical German and French music in the wine section of a store to see whether musical background as an environmental stimulus could influence product choice of German and French wines. In the end, while German music was playing, German wines outsold French wines, whereas French wines outsold German wines while French music was playing. In another study conducted by Walsh et al. (2010), the researchers attempted to understand how store-related stimuli such as in-store music and aroma (smell) experienced at the point of purchase may influence customer satisfaction, which in turn leads to store loyalty. For example, when individuals enter a coffee shop they are welcomed with a delicious smell of coffee and music playing in the background, which makes it a suitable place to observe how

these store-related cognitions can guide consumers' behaviors. During the research, trained interviewers visited stores on different days of the week at several times each day to observe customers' behaviors. Results demonstrated that favorable perceptions of in-store aroma and music positively influence the level of satisfaction of customers which in turn leads to store loyalty. Similarly, Milliman (1982) also studied the effect of in-store music on shopping behavior. He proposed that tempo variations in background music (slow vs. fast) would influence in-store traffic flow in the supermarket and daily gross sales. At the end of the research, it was found that during the times when slow-paced background music was playing, traffic flow in the store was significantly slower compared to fast-paced music. Surprisingly, having slow-paced music led to even slower traffic than no background music. As another finding, the research also concluded that slow-paced music generated higher sales volumes since customers ended up spending more time in the supermarket as they move slowly around the aisles. Similarly, customers at a restaurant also were exposed to slow-paced music and they spent more time at the table, and they bought more beverages compare to other group of people who had been exposed to fast-paced music. By looking at these literature findings, it can be concluded that the environmental context consumers are in may serve as a stimulus and may influence subsequent consumption behaviors.

In addition to the previous studies, other research also indicates that marketing stimuli may activate goal-driven behaviors through the priming effect. For example, Ooijen et al. (2017) claim that product shape might serve as a goal-directing behavior among consumers to promote healthiness perception by mimicking healthy body shape (slim vs. wide shaped body). Consumers who are looking for healthy food options may perceive product shape as a symbolic cue that signals for healthiness. Ooijen et al. (2017) propose that health-relevant cues such as long and slim packaged shape may be helpful for the consumers who have healthy goal-directed behavior while evaluating product quality. Their results strongly support that slimmer packaging leads to activation of healthiness perception because symbolic cue help consumers to form a connection between a healthy body shape and healthiness. Their research also included another experiment where they studied the effects of brand

name as a stimulus to influence consumers behavioral tendencies. At the first part of the task, subjects were exposed to the brand slogans which appealed to healthiness or hedonic qualities. Then, subjects were displayed with a virtual product shelf containing different sized product packages from different drink yogurt brands. They found that when people were exposed to a brand slogan that promotes healthiness, subjects were able to identify a specific brand quicker when it used slim packaging. Their findings show that if people are exposed to a marketing stimulus which aims to activate goal-relevant behaviors, then consumer decisions may be influenced in the direction of that specific goal.

To date, the priming method has been used in many consumer behavior studies to examine how consumer's decisions may be influenced by various internal and external stimuli. One particularly important type of stimuli which has been focused to exert influence on consumers is the brand. For example, if a person is interested in being sophisticated, then a brand name which is associated with sophistication such as Cartier, Hermes etc. is sometimes necessary for changing the behavior of consumers. This specific method that uses brand characteristics to prime people is called brand priming and numerous studies exist in the consumer behavior literature on this topic. The next section of this thesis will specifically focus on brand priming and attempt to investigate what brand attributes may elicit consumer's attitudes and behaviors.

2.4.3.1. Brand Priming

Before going into discussion of brand priming, first, it is crucial to define what brand means. Most of the time, when consumers see a brand, logo and name are the first two things that come to their mind. However, brand is much more than just name and logo. The American Marketing Association (2020) defines a brand as *"a name, concept, design, symbol, or any other characteristics that describes firm's goods or services as distinct from competitors"*. Keller (2008) defines a brand as something that adheres in the mind of consumers which affects how they feel and think about products and services offered. A brand is one of the assets of a firm that can provide a competitive advantage to business since it serves as a communication tool to

establish a bond between consumers and products. It can be understood how brand value is important for a company when we consider that the majority of marketing strategies try to ensure proper brand associations in the consumer's mind by implementing well-developed positioning strategies. These strategies can influence, activate, or prime mental associations and cause consumers to act in a manner emphasized by brands. Consumers can be exposed to subtle cues coming from several sources in marketing and advertisements constantly such as brand name, logos, slogans, and packaging colors. These brand cues can help consumers to develop favorable brand associations which assist consumers to evaluate brand relevant information and symbolic meanings attached to brands or products. For this reason, it is crucial for marketers as well as researchers to understand how a brand stimulus can activate mental representations and affect subsequent consumer behavior in turn. Brand priming research examines how exposure to a brand can elicit attitudes and behaviors as a response to brand exposure (Mantovani and Galvão, 2016). Existing brand priming studies have shown that people can be primed through brand identity characteristics (Brasel and Gips, 2011), brand personality (Berger and Fitzsimons, 2008), brand slogans (Laran et al. , 2011), brand placebo effects (Alves et al., 2017; Irmak et al., 2005), brand logo (Mantovani and Galvão, 2016), print advertisement (Maher and Hu, 2003), and brand concepts (Aggarwal and McGill, 2012) and this priming can affect consumers' attitudes, values, behaviors without the consumer being consciously aware of such influence.

A well-known brand priming study which had been done by Brasel and Gips (2011) investigated the double-edged effect of brand identity characteristics which can influence consumer performance either positively or negatively. In this research, subjects were asked to play a video game (Forza Motorsport 2 as stimulus environment) while Mini Cooper was chosen as the study car since it is easier to control even for participants who are inexperienced game players. Speed and time were objective performance metrics in their study and for that purpose, they purposely choose Red Bull as a target brand which has brand identity characteristics such as speed, power, energy and aggressive risk-taking. To measure the priming effect, other beverage brands which are Tropicana, Guinness and Coca-Cola that are

associated with personality traits such as honest, success, and cheerful were also used. Compared to the other four beverage brands, they hypothesize that exposure to a Red Bull brand would serve as an environmental trigger that will stimulate a faster and more aggressive racing style. Under a controlled laboratory environment, subjects were told to finish three-lap races as soon as possible by using each of the four branded cars and one unbranded car as the control condition. Their results demonstrated that the Red Bull condition was significantly different from other conditions. Red Bull was the one brand that had an uneven race speed distribution. Also, Red Bull cars were found to be either the fastest or slowest car during the whole gaming experience which explained the “double-edged effect”. Having brand identity characteristics which are speed and power were consistent with their hypothesis; however, their results showed also that it was the slowest car during the game. In order to explain the slow racing record, they checked the amount of time participants spent off-track. They found out that being primed with Red Bull brand encouraged subjects to maintain fast, aggressive and risky driving strategies which resulted in going off track. When participants got off track, the car slowed significantly, leading participants to lose time as they tried to return the racetrack. These findings suggest that mere exposure to strong brand identity characteristics can elicit consumer behaviors in an unconscious manner through brand priming.

In another study, Fitzsimons et al. (2008) examined whether brand primes can activate goal relevant end-states and thus influence goal-oriented behaviors. Their objective in the study was that, since brand personality traits are thought to be linked to personality traits, brand primes should also serve as personal primes and may elicit personal representations through behavioral changes to reach a desired personal outcome. To observe the priming effect, participants were subliminally exposed to Apple and IBM brand logos. Although both brands were evaluated positively in terms of their associations, Apple brand was associated with being creative and innovative whereas IBM represented characteristics such as traditional and smart. In the study, after being subliminally exposed to brand logos, participants were asked

to complete an “unusual uses” task⁹ to measure creativity. Fitzsimons et al. (2008) proposed that if the goal is to be creative, then being primed with a brand which is strongly associated with creativity like Apple should evoke goal-driven creative behavior. However, since IBM is goal irrelevant prime, there will not be any influence on behavior. Their results were consistent with their hypothesis and showed that people who are exposed to Apple generated a higher number of total uses compare to subjects who are exposed to IBM. This research shows that brand primes can be a strong influence in consumers’ goal-driven behaviors when brand is relevant to that specific goal. In this case, Apple was strongly related to being creative as it had led to the activation of goal-relevant behaviors on participants subconsciously. Other research also examined how brands that are associated with certain personality traits can influence subsequent consumer behaviors and found similar results, indicating that brand personality associations can evoke goal-driven behaviors that are consistent with brand personality trait (Baxter et al., 2018; Mantovani and Galvão, 2016).

While evaluating several brand choices, consumer’s internal contexts like value systems may influence the consumption decision process by affecting judgments towards advertised products. Maher and Hu (2003) analyzed whether consumer’s internal frames like materialistic values can influence consumer information processing of print advertisements by using the priming method. Since materialistic people tend to be more sensitive about the display of materialism while processing information, those cues may help activation of materialistic values. In their study, they proposed that when an advertisement claim and the subject are similar in materialistic values dimension, assimilation will occur, and the subject’s subsequent behavior will be influenced by the target ad stimulus. As a result of this, the consumer will find the brand advertisements’ claim more appealing and interesting which will eventually influence information processing. To test their hypothesis, they created an automobile advertisement including cues referring to high and low materialistic

⁹ Aim of unusual uses task is to generate as many unusual uses as possible for common objects. For example, when a person sees a paper clip, the ordinary use for the object is to hold a paper. However, using it as a hair clip or wearing it as an earring are considered unusual uses of a paper clip (Fitzsimons et al., 2008).

appeals. Materialistic ad claims were presented to subjects who have high level of materialistic values (high similarity conditions) while nonmaterialistic advertisement claims were given to subjects with low materialistic values (low similarity conditions). Their results showed that consumers compare given advertisement claims to their own materialistic values before arriving at any judgments. These findings suggest that preconceived and evaluative outcomes were influenced by the interaction between individuals' internal materialistic orientations and brand advertisement materialistic claims. From this study, it can be concluded that consumers process incoming stimuli from brands and make comparative judgments by using their own internal context. Moreover, many studies have focused on conceptualization and assessment of the materialism construct. This study extends the literature investigating materialistic values by examining how materialistic values are used to process information.

In this chapter of the thesis, main goal was to understand and provide information about the factors influencing how consumers decide to behave sustainably or not under various contexts. Comprehensive literature analysis reveals that values are one of the strongest indicators that provide an explanation to sustainable consumption attitudes and behaviors. Literature findings also emphasize that altruistic and materialistic values have a primary role in influencing sustainable consumption attitudes and behaviors. It is well established that values, attitudes and behaviors can be influenced through utilizing cognitive methods such as priming. In the next section of this thesis, by relying on literature findings which were discussed, conceptual development and research hypotheses will be introduced.

CHAPTER 3

CONCEPTUAL DEVELOPMENT AND HYPOTHESES

3.1. Chapter Outline

This chapter aims to provide a conceptual basis for the proposed research framework and to provide a rationale for developed hypotheses. By referring to literature findings that we have previously discussed, this chapter provides a baseline for the developed conceptual framework and hypotheses. Initially, a general overview of research gaps, research questions, and conceptual framework will be discussed. Next, the relationships between discussed concepts will be established with the support of literature findings. At the end of this chapter, the developed hypotheses will be introduced and proposed.

3.2. Conceptual Research Gaps, Questions and Conceptual Model

Primes are used very often in marketing. It can be either manipulating the color, size, or shape in advertising to stimulate emotions in an attempt to emphasize consumer goals to enhance goal pursuit. Despite the fact that primes are frequently used in marketing, some studies may fail to establish a connection between priming theories and priming techniques. Moreover, they do not specifically define the underlying process models of priming technique. Those failures raise concern among scholars, especially when a specific study borrows poorly developed experimental settings from prior studies (Minton et al., 2017).

Janiszewski and Wyer (2014) explain that in order to increase the strength of the priming effect, multiple types of priming should be implemented based on research purposes. They state that most of the priming studies in consumer behavior combine different types of priming; however, these studies fail to address prime types that had been used and mainly focus on the dominant type of priming while developing methodology. Furthermore, Minton et al. (2017) state that priming studies investigating consumer behaviors do not discuss the priming effect relating to survey responses. Most of them do not include a scale development process in methodology,

although they assess consumers' responses through surveying. Besides, Janiszewski and Wyer (2014) claim that another common problem in some priming studies on consumer behavior is that there is no clear distinction between priming methodology and measurement of the priming outcome. They state that it usually occurs when scholars develop a survey that uses behavioral priming methods to promote consumers' purchasing behaviors. However, such behaviors are measured through general cognitive-based purchase intention questions that are imperfect estimates of actual buying behaviors. Consequently, a gap occurs between purchasing intentions and actual buying behavior (Minton et al., 2017). In that case, if researchers focus on subsequent behavior of specific attitudes, it may provide more accurate results. For this reason, this thesis research specifically focuses on sustainable consumption attitudes – which are the strongest indicators of sustainable consumption behaviors – to investigate the attitude-behavior gap. Furthermore, this thesis proposes to explore personal values like altruism and materialism which have strong connection between brands and sustainability. Aligned with this, the next section will attempt to establish a theoretical relationship between these two value systems and sustainability.

3.2.1. The Relationship between Green Values and Sustainability

The psychological egoism theories claim that all individuals' actions are egoistically motivated. Eventually, every individual wants to find happiness for himself which is closely linked with egoism. As a result, Levit (2014) asserts that altruist individuals' desire to be happier indicates that they are not truly altruistic. However, he also states that an act can be called solely altruistic only if a person is motivated to help others while being totally indifferent to her own needs at the same time. Also, in that situation, it is important that actual rewards are not obvious for the specific helping behavior. As discussed earlier, some of the sustainable behaviors such as recycling are found to be related to altruism since immediate rewards are not observable, and also individuals do not receive immediate rewards by engaging in sustainable behavior. Materialism, on the other hand, includes motives that are structured by the goal of improving one's own well-being and happiness while

focusing on self-benefits and has a negative relationship with sustainability (see section 2.2.2.).

As stated earlier, materialistic people are not willing to make sacrifices in their consumption habits to engage in SCBs, which will result in diminished happiness and satisfaction (Ottman et al., 2006). Instead, they prefer products that have symbolic value, such as those that confer high status. However, when it comes to performing sustainable behavior in the public eye, materialistic people consider this situation as an opportunity to improve their status and reputation in society. As a result, they may be likely to engage in sustainable consumption behaviors (Naderi and Strutton, 2015). Moreover, individuals who are motivated by egoistic concerns may engage in sustainable behavior when presented with a self-enhancing message based on the situational context (De Dominicis et al., 2017). The earlier discussion also claims that even though the majority of researchers report a positive relationship between altruism and sustainability, and a negative relationship between materialism and sustainability, there are a few studies claiming otherwise. What is more, while linking altruistic and materialistic value to expressions of sustainable attitudes and behaviors, they consider those two value systems as an internal and enduring mechanism.

In environmental psychology, there is little research looking for what situational factors can trigger sustainable attitudes and behaviors. Those scholars do not account that individuals may perform contradicting patterns of behavior with their value systems within the environmental context that they are in. For this reason, it is crucial to investigate how people behave as a result of being exposed to an environmental stimulus in the context of sustainable consumption. By doing so, mental processes can be understood by investigating the stimulus-behavior link. Thus, our study is looking at something that contributes to this gap from a marketing perspective. With these motivations, the next section will provide information about how the priming method, which utilizes situational and environmental cues to influence subsequent behavior, can activate values and, in turn, influence sustainable consumption attitudes and behaviors.

3.2.2. How Does Priming Influence Green-related Values?

As stated earlier in the previous chapters, there is limited research investigating how the priming effect can influence SCAs and SCBs. Only a few researchers examined how mere exposure to a stimulus can activate sustainability-related concepts (Good, 2007; Mazar and Zhong, 2010). For example, within the priming paradigm, Mazar and Zhong (2010) propose that mere exposure to green products and purchasing such products can activate prosocial and ethical behavior among consumers who attach importance to altruistic values. In their study, participants were randomly exposed to two types of stores which are green and conventional. Both stores carried the same number of products; however, the ratio of green and conventional products was different. In the prime condition, the green store consisted of nine green/three conventional products, while the no-prime condition used a conventional store with nine conventional/three green products. Then, participants were given a 25-dollar budget and told that they would get the products that they picked from those stores. In the second part of the experiment, subjects were led to believe that they were matched with another person in a different room, although there was no such person. Subjects were told that they had to allocate six dollars between him and a recipient. In the end, he could keep the money that he did not offer. To illustrate, if a person had decided to keep four dollars, the recipient in the different room would get two dollars.

Their results indicated that participants who were exposed to green products in prime condition shared more money compared to those in no prime condition. It can be concluded that if people are being primed with green products, altruistic values can be activated since those two concepts have a positive relationship (See section 2.2.3.). In turn, altruistic values can elicit prosocial behaviors like helping others and sharing. However, this pattern had revealed contradicting results in the purchasing situation. Participants who had bought products from the green store shared less money than those who purchased from the conventional store. Overall, this study establishes a basis for explaining how mere exposure to green products can activate altruistic values and elicit subsequent unselfish behaviors while also revealing contradicting results. Additionally, it utilizes the priming methodology within the

domain of sustainability. However, it does not measure sustainable consumption attitudes and behaviors.

Another study which was conducted by Good (2007) attempted to explore the links between television viewing and individuals' attitudes towards the environment by collecting data through surveying. In his study, he claims that television viewing leads to a lower level of concern for the environment because television viewing has a positive relationship with materialism, owing to the fact that TV advertising content exposes the audience to certain messages which promote a materialistic lifestyle. Consequently, his results demonstrated that heavier television viewers who were exposed to advertisements more than lighter viewers were more likely to be materialistic and, in turn, had less favorable attitudes toward the environment.

What is more, Yoon (1995) investigated how television advertising generates favorable attitudes towards materialism. Because marketers use brand advertisements as a tool to support materialistic value, these advertisements cause people to compare themselves with the idealized images in the given content and encourage them to achieve a similar lifestyle through consuming advertised products. He revealed that television viewing is negatively related to concern for the environment since it leads to activation of materialistic values through being exposed to advertisements that promote a materialistic lifestyle. Thus, it can be concluded that marketers induce materialistic values through brand advertisement and use specific content as a tool to portray a materialistic lifestyle. As a result of this, consumers' subsequent behavior is influenced by the primed contexts in the advertisements. Thus, this study is effective in illustrating how a stimulus that signals a materialistic lifestyle can affect subsequent sustainable behaviors. However, the study does not fully incorporate priming as a methodology and does not discuss how exposure can influence individuals' behaviors. Our study attempts to contribute to this gap by specifically utilizing the priming methodology to investigate the effects of brand priming on sustainable consumption attitudes and behaviors.

3.2.3. Conceptual Framework

Based on the comprehensive literature analysis and research gaps which were discussed earlier, the present thesis attempts to investigate how a marketing stimulus such as brand concept can promote sustainable consumption attitudes and behaviors both positively and negatively. Is it possible that these kinds of marketing stimuli make consumers act and feel differently? What are the implications for sustainability?

This thesis also tries to understand the psychological process by which this occurs. Does brand priming activate self-related values, in turn, SCAs and SCBs? Which values may play an active role in the relationship between brand priming, SCAs, and SCBs? This study proposes that if people are being primed with different brand concepts, certain value systems such as materialism and altruism can be triggered, and activation of these value systems may intervene in the sustainable consumption process. As a result of activating materialistic and altruistic values, individuals' SCAs and SCBs can be influenced in the direction of primed context.

A comprehensive literature review provides the basis for understanding how the strength of brand priming influences consumers' subsequent behaviors. The proposed conceptual model rests on the premise that if people are being primed with the brand concept, their pro-environmental attitudes and behaviors can be influenced. Within the priming paradigm, the primes are mainly used to manipulate knowledge activation and prime specific outcomes. For this reason, primes are operated as independent variables since they influence response to a target. In the context of this thesis study, we propose that brand primes associated with a particular brand concept may influence the relationship between brand priming, SCAs and SCBs. While this process occurs, exposure to a brand stimulus can activate relevant value systems which are associated with a brand concept and these value systems can affect the relationships between brand stimulus, SCAs and SCBs. By examining literature findings, none of the researchers in consumer behavior and environmental psychology tried to implement brand priming methodology to investigate sustainable

attitudes and behaviors. In line with that, the next section of this thesis focuses on hypotheses development by referring to previous literature findings.

3.3. Research Hypotheses

This study is based on previously developed theories examining the relationships between materialistic values, altruistic values, and sustainability as well as the effects of brand priming on consumers' subsequent behaviors. In order to understand the effects of brand priming on sustainable consumption attitudes and behaviors, the current study derives two main hypotheses from the above discussion. These hypotheses relate to antecedent factors affecting sustainable consumption attitudes and behaviors and priming outcomes using the brand concept to influence consumers' sustainable consumption attitudes and behaviors.

Priming provides means for triggering specific ideas and lets these ideas become more accessible to the mind by facilitating the judgment process. In other words, the primed context serves as a standard of comparison while making judgments. As mentioned earlier, values are among critical factors while processing information and developing a specific behavior. Furthermore, values represent a specific goal, and individuals perform behaviors consistent with their values (Rokeach, 1973). Furthermore, when values relate to real-life choice situations, they are likely to come into individuals' minds by influencing decision-making. Although values are mainly affected by individuals' internal mechanisms, they can also be influenced by extrinsic cues or signals such as well-known brand names or brand information. Previous studies on consumer behavior and cognitive psychology also support this argument by providing reliable and valid results (Ashikali and Dittmar, 2012; Lusk et al., 2007; Maher and Hu, 2003; Mazar and Zhong, 2010). Thus, this thesis study focuses explicitly on activating materialistic and altruistic behaviors through brand priming to influence SCAs and SCBs. With this reasoning, the next sections will propose two hypotheses that attempt to understand the effect of these two value systems on SCAs and SCBs.

3.3.1. Materialism, Priming, SCAs and SCBs

As discussed earlier, materialistic individuals' consumption motives are driven by protecting, maintaining, and enhancing self through acquired goods and services (Campbell et al., 2011). By doing so, they feel satisfied and good about themselves. Moreover, they enhance themselves through conspicuous consumption, including acquiring prestigious products (Zhang and Shrum, 2009). In acts of consumption, they display distinct consumer behavior patterns. For example, they prefer brand names over utilitarian benefits of a product and buy products that have symbolic meanings (e.g., authentic designers' clothes and jewelry, top range cars, expensive accessories) to get attention from others (Campbell et al., 2011). They also tend to purchase products with specific brand names that are associated with prestige, status, and power. Thus, they define their self-identity through these brands that is otherwise vague and abstract (Sharda and Bhat, 2018). Moreover, the famous brand-named possessions help materialistic people to shape and state their self-concept.

Because materialistic people are more sensitive towards brands, materialism has become a well-studied topic for consumer behavior and marketing research, as it provides broad implications for researchers and marketers. Past research shows that if people are being primed with external cues signaling materialistic values like the brand stimulus, their behaviors are influenced by the prime (Maher and Hu, 2003). This research also demonstrates that if a brand claim and the subjects are similar along with materialism, individuals will make judgments in the direction of the primed context.

Research in consumer behavior shows that materialistic values promote conspicuous consumption and influence impulse buying and hoarding, which contradict sustainability. Many scholars in environmental psychology investigated the relationship between materialism and sustainability (D'Souza et al., 2007; Kilbourne & Pickett, 2008; Polonsky et al., 2014; Sharma & Chandni, 2017; Shukor et al., 2017) and reported that materialistic values lead to unsustainable consumption patterns. Accordingly, people with high levels of materialistic values are less likely to display environmentally conscious behaviors and, instead, will adopt a lifestyle that has a large ecological footprint (Wang et al., 2019). That is, they have a strong

desire to obtain immediate gratification by consuming luxury brands and disregard the negative consequences of their consumption habits on the environment (Sharda and Bhat, 2018). Thus, in light of these literature findings discussed above, the following hypotheses were developed:

Hypothesis 1a: Priming people with luxury brand concepts activates materialistic values, which will decrease sustainable consumption attitudes.

Hypothesis 1b: Priming people with luxury brand concepts activates materialistic values, which will decrease sustainable consumption behaviors.

3.3.2. Altruism, Priming, SCAs and SCBs

Altruistic individuals have a high level of motivation to protect the welfare of others without the anticipation of external rewards. Thus, they become involved in intentional and voluntary actions that aim to benefit others. The relevance of altruism to sustainability occurs from the fact that since the environment is accessible to everyone, even one individual's behavior may impact others (Reimers et al., 2017). Akehurst et al. (2012) claim that altruism is one of the prominent influencers of sustainable consumption attitudes and behaviors. This claim is also consistent with other literature findings discussed earlier (Hopper and Nielsen, 1991; Lusk et al., 2007; Saroglou, 2013; Shukor et al., 2017). Thus, engaging in sustainable consumption behaviors is therefore altruistic in that it enables individuals to obtain future-oriented outcomes that benefit other individuals in the society as a whole (Kim and Choi, 2005; Lee and Holden, 1999). In doing so, they consider the impact of their purchasing on other individuals. This also leads to distinctive consumption behavior patterns while choosing among brands. To illustrate, altruistic people tend to enhance themselves by consuming a brand that is consistent with the main motivations of altruism. They prefer brands which have a main goal of preserving the environment while performing business activities as well as improving the welfare of society.

As businesses market their products and services, consumers are exposed to several product cues, including country-of-origin, fair trade status, organic labeling, and so on (Powers and Hopkins, 2006). Although some consumers are unaware of such information, altruistic people specifically search for these types of information

in products as well as brands. Thus, it can be concluded that altruism might be a motivating force in buying a specific brand and product.

As stated earlier, if people are primed with a green product concept, their subsequent buying behaviors can be influenced (Mazar and Zhong, 2010). Thus, mere exposure to a green product can activate concepts relating to altruism. And since altruism is compatible with sustainable consumption attitudes and behaviors, consumers' subsequent behaviors may be influenced by the brand priming effect. Aligned with those literature findings, the following hypotheses are developed:

Hypothesis 2a: Priming people with sustainable brand concepts activates their altruistic values, which will increase the sustainable consumption attitudes.

Hypothesis 2b: Priming people with sustainable brand concepts activates their altruistic values, which will increase the sustainable consumption behaviors.

CHAPTER 4

METHODOLOGY

4.1. Chapter Overview

This thesis aims to examine the effects of brand priming on sustainable consumption and behaviors. Specifically, this thesis study focuses on the effects of materialistic and altruistic values as factors influencing SCAs and SCBs as a result of mere exposure to a brand stimulus. The relationships between these terms and concepts were established in previous chapters, and hypotheses derived from these relationships were introduced. Moving on, this chapter intends to provide a rationale for the experimental methodology and presents information about the measurement tools used to assess levels of materialism, altruism, SCAs, and SCBs, respectively. To examine the effects of brand priming on SCAs and SCBs, the current thesis developed two similar yet distinctive experimental designs to trigger altruistic and materialistic values.

4.2. Experiment I

Aligned with hypotheses 1a and 1b, experiment I's objective is to test whether materialistic values are generated by exposing subjects to a set of luxury brand names and to measure the potential effect on their SCAs and SCBs.

4.2.1. Sample

One hundred and sixty participants participated in experiment I, 61 women and 99 men. Participants were chosen among undergraduate and recent graduate students whose age ranges' mainly between 18-23 (%44,4) and 24-27 (%44,4). The majority of the students were undergraduate students (%61,9), but our sample also includes master (%30) and PhD students (%18,1), respectively. Lastly, the modal monthly budget for the sample (%33,8) was reported as "2000 TL or more" while the monthly budget level of 28,1% is between 1500-1999 TL. The detailed composition of subjects is presented in Table 4.1.

Table 4.1. Demographic composition of participants in experiment I

	Frequency	Percent
Gender		
Female	61	38,1
Male	99	61,9
Age Group		
18-23	71	44,4
24-27	71	44,4
28-34	17	10,6
34 or more	1	0,6
Education Level		
Undergraduate	99	61,9
MSc	47	30
PhD	14	8,1
Monthly Budget		
Under 500 TL	10	6,3
Between 500-999 TL	21	13,1
Between 1000-1499 TL	30	18,8
Between 1500-1999 TL	45	28,1
2000 TL or more	54	33,8

4.2.2. Stimulus Selection and Pretests

Stimulus Selection. Earlier discussion in this thesis states that materialistic people are looking for specific information while engaging in purchasing decisions. They tend to choose possessions that will provide status, prestige, and power. Materialistic individuals are likely to define their identity through the products they acquired, and those possessions become an important part of self (Belk, 1988). Furthermore, they rely on possessions to provide meaning in life and define their success. Belk (1985) states that specific possessions such as automobiles might be more important than others since they may signal accomplishments in life. Gatersleben (2011) emphasizes that symbolic aspects of owning a car might play a crucial role for materialists.

If a specific car is perceived as a symbol of status and success, it is expected individuals who score high in materialism would be more likely to own a car which

will provide status enhancement benefits. Besides, these people will attach a significant amount of value to their cars and be less willing to reduce personal car usage, and they will avoid using public transportation. These findings support that automobiles are recognized as symbols of success, power, and wellbeing. In addition to these, Maher and Hu (2003) also emphasize that especially cars with luxurious features can serve as a tool to activate specific associations in the memory and may lead to activation of materialistic values.

Another product category that is believed to attract materialistic individuals' attention is the apparel market. Bloch and Richins (1983) point out that clothing involvement is considered as the "centrality of the objects to the person's ego structure", and it includes enthusiasm for the product category due to self-enhancement. Apparel is a meaningful and visible way of displaying self to others as well as to the world. Lurie (1981) claims that one of the main functions of fashion is to display self in a social context and, accordingly, clothes tell a story about those who wear them and how much status and prestige they have. If owning goods let individuals create their self-identity, then wearing them achieves this end in a powerful way. Besides, owning the latest style of clothing is one of the most common ways for consumers to gain a reputation and prestige among their peers (Goldsmith et al., 2012). Moreover, literature findings also underline that materialism and clothing involvement has a positive relationship (Goldsmith et al., 2012).

Overall, it can be concluded that materialistic individuals obtain distinction and recognition by spending money on particular products like cars and clothing that will exhibit status and power to significant others. They mainly focus on brands and use them to shape and improve self-concept (Spratt et al., 2009). Materialists have a higher preference for brand names during the purchasing process and may prefer brands that reflect well on them. The brand name is a sign which offers the emotional attachment for which materialistic consumers specifically seek (Goldsmith et al., 2012). Furthermore, this argument is even stronger when materialism is high.

By taking these literature findings into consideration, the present research uses cars and clothing to activate materialistic values, because these two product categories seem the most relevant products for our research purposes. Also, because

materialists are more sensitive towards the brand name, we expect brand priming to evoke materialistic values by exposing subjects to a luxury brand concept.

Overall, our experimental stimuli consist of two different product categories: clothing and cars. Each product category also has different conditions: prime condition and no-prime condition. In the prime condition, participants will be exposed to luxury brand names for the two product categories. In order to successfully understand which brand is perceived as luxury or not, a pretest was conducted on 45 students. The next section will discuss how the pretest was conducted and provide findings of the pretest study.

Pretests.

Brand Name Selection. Each individual has different perceptions towards a specific brand based on their lifestyle, demographics, and values. For this reason, a pre-test was conducted in order to understand how selected brand names are perceived by people in terms of their luxuriousness and familiarity. It was crucial to find appropriate brand names to use as manipulations, to ensure that participants, when exposed to the brand, have the correct brand position in mind. For this purpose, brand names should be familiar to participants so that they can conceptually make connections between whether the brand name is a luxury brand or not. For this purpose, a pretest was conducted among forty-five students, where they were given a list of brand names for selected categories: regular clothing, regular car, luxury clothing, and luxury car brands (see Appendix B). Moreover, brand names were randomized to eliminate the order effect in the pretest. Participants were asked to indicate the level of familiarity for each brand on a seven-point scale (1=Not at all familiar; 7=extremely familiar), and also indicate how luxurious the brand is (1=not at all a luxury brand; 7=totally a luxury brand).

After data collection, means were calculated for luxury perception on all car and clothing brands, as well as the grand mean for each. Additionally, the same procedure is followed for familiarity, separating cars and clothing (see Appendix C). To select brand names that would be used in the study, luxury perception is prioritized as the selection criteria. The brands that scored highest in luxury perception and scored above average in familiarity were selected (See Table 4.2, Table 4.3, Table 4.4, Table

4.5). To illustrate, the mean of Porsche in luxury perception test was greater than the grand mean ($\bar{X}_{plc}=4.84 < M_{plc}=6.93$) at a significant level ($p_{plc}<.000$) and also significantly above the grand mean for familiarity ($\bar{X}_{flc}=5.84 < M_{flc}=6.42$). The same approach is applied to each brand. However, three brands which are Gucci, Suzuki, and Koton are evaluated differently. For instance, Suzuki scored lowest in terms of luxury perception and was significantly different than the grand mean ($p_{prc}<.000$). On the other hand, the brand was slightly below average in the familiarity test ($M_{frc}=5.76 < \bar{X}_{frc}=5.91$), but not significantly so ($p_{frc}<0.772$). Similarly, although the other two brands were also below the grand mean for familiarity, neither Gucci ($p_{flt}<0.951$) nor Koton ($p_{frl}<0.280$) were significantly below it.

Table 4.2. Pre-test results for chosen luxury car (LC) brands

Brand Name	Luxury Perception (P)				Familiarity (F)		
	N _{plc}	M _{plc}	S _{plc}	P _{plc}	M _{flc}	S _{flc}	P _{flc}
Porsche	45	6.93	0.25	0.000	6.42	0.99	0.059
Ferrari	45	6.82	0.61	0.000	6.11	1.50	0.543
Lamborghini	45	6.62	0.96	0.000	6.18	1.44	0.432
Mercedes	45	6.56	0.89	0.000	6.53	0.99	0.026
BMW	45	6.27	0.69	0.000	6.27	1.36	0.295
Audi	45	6.04	0.80	0.000	6.20	1.39	0.389

Note. $\bar{X}$ = Grand mean, M=Mean, S=Standard Deviation, P= p value, $\bar{X}_{plc}=4.84$, $\bar{X}_{flc}=5.84$

Table 4.3. Pretest results for chosen regular car (RC) brands

Brand Name	Luxury Perception (P)				Familiarity (F)		
	N _{prc}	M _{prc}	S _{prc}	P _{prc}	M _{frc}	S _{frc}	P _{frc}
Nissan	44	3.68	1.85	0.009	6.36	1.05	0.145
Fiat	45	3.49	1.77	0.002	6.24	1.32	0.376
Honda	45	3.33	1.78	0.001	5.96	1.72	0.926
Renault	45	3.31	1.86	0.001	6.07	1.68	0.743
Hyundai	45	3.29	1.75	0.000	5.98	1.59	0.881
Suzuki	45	3.07	1.68	0.000	5.76	1.89	0.772

Note. $\bar{X}$ = Grand mean, M=Mean, S=Standard Deviation, P= p value, $\bar{X}_{prc}$ =4.84, $\bar{X}_{frc}$ =5.91

Table 4.4. Pretest results for chosen luxury clothing (LT) brands

Brand Name	Luxury Perception (L)				Familiarity (F)		
	N _{plt}	M _{plt}	S _{plt}	P _{plt}	M _{flt}	S _{flt}	P _{flt}
Gucci	45	6.27	1.16	0.000	4.89	2.18	0.951
Chanel	44	6.09	1.71	0.000	5.36	2.09	0.515
Burberry	43	5.95	1.15	0.000	5.00	2.23	0.920
Armani	45	5.87	0.89	0.000	5.36	2.00	0.497
Dior	44	5.84	1.45	0.000	5.13	2.38	0.783
Tommy Hilfiger	45	5.44	1.42	0.001	6.16	1.31	0.005

Note. $\bar{X}$ = Grand mean, M=Mean, S=Standard Deviation, P= p value, $\bar{X}_{plt}$ =4.32, $\bar{X}_{flt}$ =4.93

Table 4.5. Pretest results for chosen regular clothing (RL) brands

Brand Name	Luxury Perception (L)				Familiarity (F)		
	N _{prl}	M _{prl}	S _{prl}	P _{prl}	M _{fri}	S _{fri}	P _{fri}
Mavi	45	3.49	1.56	0.023	6.47	1.12	0.280
H&M	45	2.91	1.88	0.000	6.53	1.10	0.186
Colin's	45	2.87	1.34	0.000	6.27	1.20	0.703
Koton	44	2.50	1.42	0.000	5.91	1.69	0.586
DeFacto	45	2.07	1.30	0.000	6.44	0.99	0.261
LcWaikiki	45	1.98	1.22	0.000	6.78	0.67	0.001

Note. $\bar{X}$ = Grand mean, M=Mean, S=Standard Deviation, P= p value, $\bar{X}_{prl}$ =4.32, $\bar{X}_{fri}$ =6.15

Word Scrambling Task Pretest. Another pretest is conducted to test the strength of the priming stimuli used here and to confirm the mechanism of action in our hypotheses for Experiment I. Based on the past research reviewed in earlier chapters, we expect that if people are primed with luxury brands, their materialistic values would be activated. In order to examine this, a pretest experiment was conducted among one hundred college students. In the pretest, participants were first exposed to a scrambling task where they unscrambled luxury and regular brand names, depending upon which experimental condition they were in. After they completed the task, they were asked to indicate the level of their materialistic values (see Appendix D).

After data collection process, independent samples t-test was conducted to compare prime and no prime conditions. The fifty participants received the priming condition were compared to the fifty subjects in the no prime condition. Group statistics reveal that there was a significant difference between the scores for prime ($M = 14.18$, $SD = 3.35$) and no prime ($M = 10.16$, $SD = 4.10$) conditions; $t(98) = 5.36$, $p = .00$. These findings suggest that luxury prime condition does increase the temporary salience of materialistic values. Specifically, our findings justify that when people are primed with the luxury brand concept, certain associations in the

memory which trigger materialistic values can be activated. What is more, our pretest results reveal that the materialistic values scale was found to be internally consistent, according to Cronbach's alpha ($\alpha = .87$). Lastly, at the end of the survey, participants were asked to indicate the purpose of the study, and none of the participants were able to understand the actual purpose of the study.

Table 4.6. Independent Samples T-test Results Word Scrambling Task

	Brand Concept	N	Mean	SD	DF	T	Sig.
Materialism	Luxury	50	14.18	3.35	98	5.36	0.00
	Regular	50	10.16	4.10			

4.2.3. Experimental Design and Procedures

After getting the approval from METU NCC Scientific Research Ethics Committee, survey invitations were shared on Facebook groups of various universities, including Middle East Technical University, Koç University, Boğaziçi University, and Bilkent University to collect the data. As the survey was administered in English, those universities were specifically chosen because the medium of instruction is English. To eliminate data duplication, the online survey tool Survey Monkey was used since it does not allow multiple answers from the same IP address for a survey and does not allow multiple responses from the same source.

The primary approach for data collection was to use a two-step procedure. At the first step, a request was sent to potential participants to take part in our study through social media posts. At the second step, after participants contacted the researcher, the survey link was sent to each participant directly. As another plan, a random redirector generating shortened URLs was utilized. This tool enables researchers to send participants to one of many different pages without letting participants know about the randomization process.

In order to test hypotheses 1a and 1b, at the first stage of the experiment, participants were given the word scrambling task in which they were presented with

luxury or regular brand names (depending on condition) for both cars and clothing (See Figure 4.1.). As stated earlier, the priming effect should occur unconsciously and subjects should not be aware of the actual aim of the study (Bargh and Chartrand, 2000; Janiszewski and Wyer, 2014; Schacter, 1992). For this purpose, participants were told that the aim of the study was to understand how the word scrambling task relates to attitudes and behaviors. Correspondingly, 80 participants were exposed to luxury brand concept prime condition while 80 received no-prime condition. In no-prime condition, participants were given regular brand names that were not expected to generate any effects on their subsequent behaviors. To illustrate, if a participant received the prime condition, they were asked to unscramble luxury brand names for different car and clothing brands, while those in the no-prime condition unscrambled regular brand names.

Once they completed the word scrambling task, the correct answers for unscrambled brand names were shown on a subsequent page in order to strengthen the effect of the priming. After showing the correct answers, participants were asked to respond to several questions regarding their materialistic values, SCAs and SCBs. Since the priming effect diminishes over time (Bargh & Chartrand, 2000), to determine whether the priming effect was successful or not, participants were first asked questions that measure the level of materialistic values. Afterward, participants were requested to indicate their level of agreement on SCAs and SCBs. Finally, they answered questions regarding their demographics, and the experiment was completed (see Appendix E).

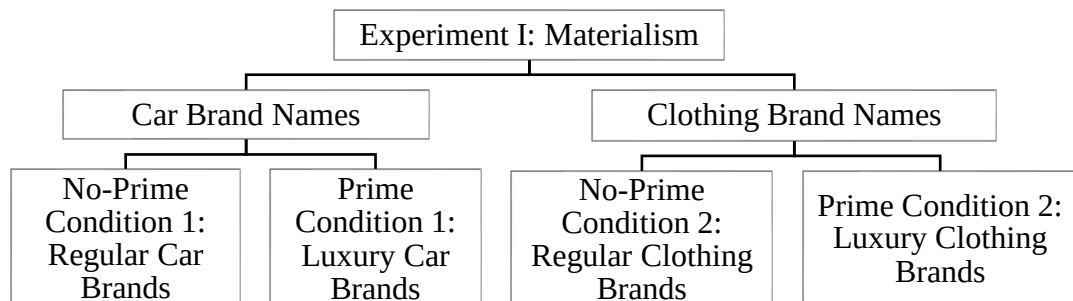


Figure 4.1. Structure of experiment I

4.3. Experiment II

Aligned with hypotheses 2a and 2b, the objective of experiment II is to test whether altruistic values are generated by exposing subjects to sustainability positioned brand information and measuring the potential effect on their SCAs and SCBs.

4.3.1. Sample

One hundred and sixty-one students participated in the second experiment that aims to activate altruistic values by exposing subjects to a sustainable brand concept and measure their level of SCAs and SCBs. The sample for the experiment consisted of 60 female and one hundred and one male students. Modal age for the sample is between 18-23. As shown in Table 4.7., 37,3% of the participants are female and while 62,7% of them are male. A total of 52,8% of the participants were in the 18-23 age range, 37,9% in the 24-27 age range, 8,7% in the 28-34 age range, and finally one participant is over 34. Regarding the education level of the participants, the modal education level for the sample is undergraduate (76,4%). Lastly, the majority of participants receive more than 2000 TL (28,6%) in a month, while 7% of them receive under 500 TL.

Table 4.7. Demographic compositions of participants in experiment II

	Frequency	Percent
Gender		
Female	60	37,3
Male	101	62,7
Age Group		
18-23	85	52,8
24-27	61	37,9
28-34	14	8,7
34 or more	1	0,6
Education Level		
Undergraduate	123	76,4
MSc	30	18,6
PhD	8	5
Monthly Budget		
Under 500 TL	7	4,3
Between 500-999 TL	32	19,9
Between 1000-1499 TL	39	24,2
Between 1500-1999 TL	37	23,0
2000 TL or more	46	28,6

4.3.2. Stimulus Selection and Pretests

Stimulus Selection. For priming stimuli, it was necessary to find brands that are realistic, familiar, and can conceivably be positioned as both sustainable and regular. These brand stimuli should be manipulated by triggering meaningful and relevant associations in participants' minds. Thus, the selected brand should also provide a theoretical relationship between priming and sustainability.

While scholars are investigating sustainable consumption behaviors, they tend to focus on specific products that have well-established connections with sustainability, such as sustainable fashion items, organic food, hybrid cars, and coffee. Among them, coffee stands out as being the world's first fair trade agricultural product (Murthy and Naidu, 2012). Due to this, coffee is among one of the well-established commodities that have fair trade certification. It is also high in demand, and as being the world's most highly traded commodity, most of the coffee

is supplied by small farmers. Furthermore, countries that produce and market coffee are underdeveloped and suffer from poor economic and social conditions.

On top of that, most of the coffee is purchased by developed countries, and this increases the carbon footprint throughout the whole value chain which creates stress in underdeveloped coffee producing countries. Due to this, especially multinational corporations like Starbucks, one of the main coffee buyers across the globe, is investing in proving its commitment to the environment by engaging in fair trade practices. In their marketing strategies and advertisements, Starbucks accentuates its sustainable practices. For example, in its cups, Starbucks emphasizes its aspiration to be sustainable and encourages consumers to learn about its practices by providing information about such practices (see Appendix H). Consequently, these types of information that brands provide help sustainability-minded individuals during information search and evaluating alternatives for sustainable and environmentally friendly products (Maaya et al., 2018).

Another product type that has well-established connections with sustainability is hybrid cars. In that product category, one of the well-known brand names for its green practices is Toyota, which offers both green and conventional vehicles to its customers. By being sustainability-focused on their business practices and offering the world's first mass-produced hybrid vehicle, the brand is reasonably well known by consumers for being sustainability oriented. Toyota is also used as a benchmark by other brands since it prioritizes sustainability as a management approach (Toyota Environmental Challenge 2050, 2018). The fact that the number of hybrid vehicles Toyota offers are more than any other car brand proves its commitment to build a sustainable future for the next generations.

Lin et al. (2017) claim that altruistic values can influence the acquisition of green brands. Altruism promotes consumers' urge to pursue ethical consumption choices since they feel a sense of responsibility and ethical obligation to contribute to society and the environment. When using green brands, their motivation is driven by helping and compassion. As a result, satisfaction can be obtained by consuming green brands such as Starbucks and Toyota. Overall, when brands claim to be sustainable, they

provide an opportunity for altruistically oriented consumers to reflect their values on consumption behaviors. As a result, those consumers associate themselves with a specific brand if such a brand can effectively deliver values that satisfy the goals of being sustainable for altruistic people. In the context of this study, we aimed to activate altruistic values by giving sustainability-positioned brand information to participants. Therefore, it was necessary to ensure that the brand concept information to be used as priming stimuli would be perceived correctly by participants, which required conducting a pretest. The next section aims to explain how the pretest was conducted and presents its findings.

Pretest.

Reading Comprehension Task Pretest. Similar to experiment I, a pretest was conducted to ensure that the priming stimuli are perceived as intended and to examine whether they will be capable of triggering altruistic values, in order to test hypotheses 2a and 2b. Hypotheses 2a and 2b propose that if people are primed with the sustainable brand concept, mental associations in consumers' minds might activate altruistic values which increase sustainable consumption attitudes and behaviors. For this purpose, a pretest consisting of 100 participants was designed to investigate whether the priming stimuli to be used in the main study would be capable of being perceived as sustainable and if it could trigger altruistic values effectively. In the pretest, participants were first given a reading comprehension task where they read the short description of Starbucks and Toyota which emphasized one of two different types of brand positioning: sustainability and regular positioned. In the prime condition, participants were exposed to sustainable positioned brand information. In contrast, participants in the no-prime condition received regular positioned brand information both for Toyota and Starbucks (see Appendix E). All short paragraphs which contain sustainable and regular positioned brand information had equivalent word count, which ranged between 131 and 139.

Once the data collection process was completed, to see the difference between prime and no-prime conditions, independent samples t-test was performed to compare means. The fifty participants who received the priming condition were compared to

the fifty subjects in the no prime condition. First, to assess whether the brand concept in the prime condition was correctly perceived as more sustainable than the no-prime condition, we asked participants to rate the sustainability of the brand. Group statistics reveals that there was a significant difference between the scores for the questions measuring sustainable positioning ($M_{\text{sustainable}} = 5.92$, $SD_{\text{sustainable}} = 1.24$) versus no-prime ($M_{\text{regular}} = 3.40$, $SD_{\text{regular}} = 1.81$) conditions; $t(98) = 8.09$, $p = .00$. Thus, the primed sustainability brand concept was perceived as intended. Moreover, group statistics showed that there was a significant difference between the scores for prime ($M = 16.90$, $SD = 2.35$) and no-prime ($M = 11.08$, $SD = 2.85$) conditions on the altruism scale; $t(98) = 11.14$, $p = .000$. These findings strongly suggest that the sustainability positioned brand concept does in fact influence the activation of altruistic values. Specifically, our findings justify that when people are primed with the sustainable brand concept, certain associations in the memory which trigger altruistic values can be activated. Also, participants were asked to indicate quality of each brand and insignificant difference between regular and sustainable positioned brand concept reveals that there was no perceived quality difference between the brand positions ($M_{\text{sustainable}}=6.22 > M_{\text{regular}}=6.20$), $t(98)=0.11$, $p=0.91 > 0.05$. Moreover, the altruism scale, consisting of four items, showed adequate reliability according to Cronbach's alpha ($\alpha = .90$). Lastly, similar to the Experiment I pretest, each participant was asked to indicate what could be the purpose of the study and none of the participants were able to understand the actual purpose.

Table 4.8. Independent samples t-test results: Reading comprehension task

	Brand Concept	N	Mean	SD	DF	T	Sig.
Altruism	Regular	50	11.08	2.85	98	11.14	0.00
	Sustainable	50	16.90	2.35			
Quality Perception	Regular	50	6.20	0.85	98	0.11	0.91
	Sustainable	50	6.22	0.95			
Sustainable positioned	Regular	50	3.40	1.81	98	8.09	0.00
	Sustainable	50	5.92	1.24			

4.3.3. Experimental Design and Procedures

After the pretest was conducted, a two-step procedure was utilized to collect the data similar to experiment I. First, the survey invitations were shared on Facebook groups of selected universities, and after contacting potential participants, the survey links were sent individually to each participant. Also, the random redirector tool was utilized for experiment II, and shortened URLs were shared on those social media pages.

As discussed previously, theoretically, some past research found a positive relationship between altruism and sustainability. Mazar and Zhong (2010) demonstrate that when people are primed with green concepts, their altruistic values can be triggered, and subsequent behaviors may alter as a result of the priming effect. With a similar mindset, two different product categories which are cars and coffee, were used in an attempt to prime subjects successfully. Our significant pretest results demonstrate that using Starbucks and Toyota to create different scenarios is viable.

To test hypotheses 2 and 2b, a bogus “reading comprehension task” was given to participants to trigger altruistic values by providing sustainability positioned information. As a cover story, participants were told that the actual aim of the study

was to understand how reading comprehension relates to attitudes and behaviors. For Experiment II in the prime condition, a sustainable brand concept was used to activate altruistic values by providing sustainability positioned brand information. On the other hand, subjects in the no-prime condition received the regular brand concept, that is, a brand position not based on sustainability (See Figure 4.2.). Overall, participants in the prime condition read a sustainability-positioned short paragraph about both Toyota and Starbucks. Specifically, in the sustainability positioned Toyota scenario, participants were exposed to information about one of its hybrid cars, the Prius. On the other hand, in the Starbucks scenario, subjects read the information about its sustainable store features. In no prime condition, short paragraphs containing regular information about those two brands were presented by mentioning information of Toyota Corolla and Starbucks's coffees (See Appendix G). Immediately after each participant completed the reading task, questions measuring altruistic values were administered to assess the priming effect. Next, they answered questions measuring their level of agreement on SCAs and SCBs and, finally, completed the survey by answering demographic questions.

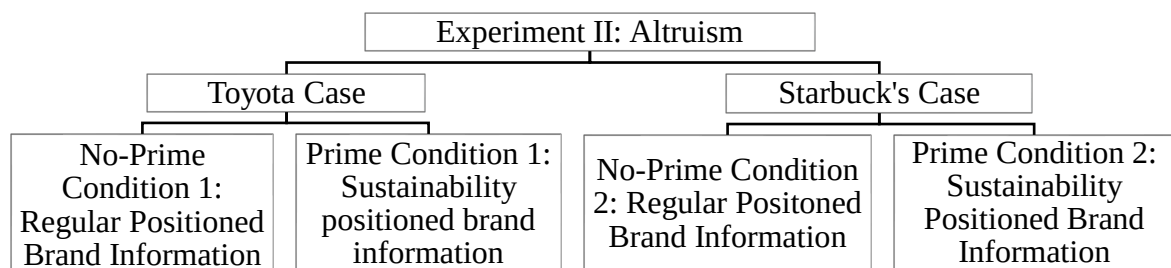


Figure 4.2. Structure of experiment II

4.4. Measures

Before discussing the scale development process, it is important to state that all items used in our study were obtained from scales that were developed and validated in previous studies. For each item and measured construct, a 5-point Likert scale ranging from 1= “Strongly Disagree” and 5= “Strongly Agree” was used.

4.4.1. Materialism

The materialistic orientation of a consumer reflects the importance that a consumer attributes to worldly possessions (Belk, 1985, 1988). Materialism has been investigated in a variety of ways by researchers while assessing personality traits, by understanding the importance of different kinds of social goals, and by measuring attitudes (Richins & Dawson, 1992). However, Richins and Dawson (1992) emphasized that it would be inefficient to approach materialism only as a personality trait since it guides an individual's way of life while influencing specific personal goals, including consumption habits. For this purpose, they developed the materialistic values scale (MVS) including eighteen items and measuring three conceptual domains of materialism constructs which are "acquisition centrality (AC), acquisition as the pursuit of happiness (AH), and possession-defined success (AS)" by focusing on consumption behaviors (Richins and Dawson, 1992). Richins and Dawson's (1992) MVS had been utilized by many researchers in the past and suggested to be a valid and reliable scale. For example, Shrum et al. (2005) used the MVS to examine whether television cultivation effects can be generalized to specific consumer values like materialism and obtained high reliability ($\alpha = .84$). Similarly, Good (2007) also reported strong reliability for this scale ($\alpha = .85$). Moreover, Richins and Dawson presented the reliability scores for each dimension of materialistic values scale (AC: $\alpha = .82$, AH: $\alpha = .86$, AS: $\alpha = .82$) and overall scale consists of eighteen items ($\alpha = .87$). Although the scale is widely used by researchers, the dimensional structure proposed in the materialistic values scale was not always evident in the data (Richins, 2004). For this reason, Richins (2004) improved and proposed an eighteen-item measure of the materialistic values that have better dimensions than the previous version. The new version was able to capture each dimension of materialism, while the previous version was designed to assess materialistic values at a general level. For our research purposes, it was important to utilize a materialism scale that specifically focuses on each dimension.

Furthermore, in the current study, it was considered important not to diminish the effect of priming. For this purpose, three items were selected and used to assess materialistic values based on our pretest results (See Table 4.3.) Also, by doing this,

the amount of time that each participant spent answering questions that measure materialistic values was decreased. Otherwise, if subjects spent more time answering many questions, the priming effect might have been reduced. Moreover, another guiding approach while selecting items from the Richin's Materialistic Values Scale (2004) was to select items that fit best with the definition of materialism and to ensure those items be related to sustainable consumption attitudes and behaviors. The three items that were chosen from the Materialistic Values Scale can be seen in Table 4.9.

Table 4.9. Items to measure materialistic values

Shortened Materialistic Values Scale (MVS)	
MVS (1)	My life would be better if I owned certain things I do not have.
MVS (2)	I would be happier if I could afford to buy more things.
MVS (3)	It sometimes bothers me very much that I can't afford to buy all the things I'd like.

4.4.2. Altruism

As stated earlier in section 2.2.3., altruism has been defined by various perspectives in the literature. Through the years, many scales were developed to measure altruistic values, and it was important for our research to find an appropriate scale that fits our research goals, including ensuring validity, reliability and fit to the experimental method employed.

Büssing et al. (2013) developed a research instrument to assess altruism in young adults including affective and behavioral elements such as empathy and compassion. The Generative Altruism Scale (GALS) is sufficient for empirical studies aiming to understand the relationship between altruism, ethical behaviors, and prosocial behaviors. Moreover, in their research, they define altruism "*as a commitment to help and care for others without expecting any external rewards*" stating that *compassion* is one of the intrinsic motivators of altruism. The previous discussion in this thesis highlights the importance of compassion in sustainable consumption attitudes and behaviors since it evokes an impulse to take action to alleviate others' pain and suffering by engaging sustainable practices. Moreover, as

mentioned earlier, some researchers claim that all behaviors interested in self are motivated by egoistic concerns, and some of the scales used to assess altruistic values fail to address this issue. However, Büssing et al. (2013) focus on generative altruism driven by compassion and empathy, which creates a feeling of responsibility. The scale also showed an adequate reliability ($\alpha = .81$) and the item difficulty index for GALS was .43 within an acceptable range from .2 to .8 (Büssing et al., 2013)

Because a priming method is utilized in our study, having a moderate difficulty index is also an important point that requires attention. Using understandable items will enable participants to comprehend questions easily. Otherwise, subjects will spend more than the necessary time on questions. As a result, the strength of the stimulus may disappear, and the priming effect might diminish.

The Generative Altruism Scale includes a seven-item construct and for the selection of items, a similar approach that was followed in the materialism scale was utilized. In order to reduce the time spent on questions, the items which are compatible with altruism definition and sustainability were selected. As a result, four items were selected from the Generative Altruism Scale as shown in Table 4.10:

Table 4.10. Items to measure altruistic values

Shortened Generative Altruism Scale (GALS)	
AVS (1)	I help others even when there is no direct benefit to me.
AVS (2)	I can give away my things to someone who needs them more than I do.
AVS (3)	I am very concerned for the well-being of other people, even if I don't know them personally.
AVS (4)	When I see individuals in need, I try to find a way to help them.

4.4.3. SCAs and SCBs

When researchers attempt to measure consumer's SCAs and SCBs, they tend to focus on a specific dimension, such as the environment. However, since sustainability is an umbrella term that covers several issues, it is important to develop

a scale measuring different aspects of sustainability. For this reason, a comprehensive literature analysis was conducted for our study to develop scales for measuring SCAs and SCBs that not only focus on environmental issues but also cover social and economic aspects. Therefore, it is important to highlight issues regarding (i) fair trade, (ii) recycling, (iii) purchasing decisions, (iv) feeling of responsibility, (v) product choice, and (vi) environmental protection. To fill this gap, different items from various scales were combined to measure the levels of SCAs and SCBs in our sample. Items were selected and modified from the Socially Responsible Consumption Behaviors Scale (Antil, 1984) ($\alpha=0.88$), the GREEN scale (Haws et al., 2014) ($\alpha=0.89$), the Fair Trade Scale (Tanner and Kast, 2003) ($\alpha=0.79$), and the socially responsible purchases and disposal scale (SRPD) (Webb et al., 2008) (See Table 4.11.).

It should also be noted that Eşsiz (2020) and Berkin (2018) also adapted a similar approach and developed similar constructs of scales that are identical to this thesis study. Berkin (2018) reported satisfactory reliability scores for both SCAs and SCBs scales, $\alpha=0.82$ and $\alpha=0.79$, respectively. Also, Eşsiz (2020) reported the alpha values of SCAs and SCBs for adapted scales as $\alpha=0.84$ and $\alpha=0.85$, respectively.

Table 4.11. Items to measure SCAs and SCBs.

Sustainable Consumption Attitudes Scale	
SCAs (1)	I'd be willing to ride a bicycle or take the bus to work (SCHOOL) in order to reduce air pollution.
SCAs (2)	It is important for me that products I use do not harm the environment.
SCAs (3)	I am concerned about wasting the resources of our planet.
SCAs (4)	I consider the potential environmental impact of my actions when making many of my decisions
SCAs (5)	Environmental protection is important to me when making purchases.
SCAs (6)	I feel sense of responsibility for workers in lower income countries that produce things I buy.
Sustainable Consumption Behaviors Scale	
SCBs (1)	I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.
SCBs (2)	I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.
SCBs (3)	I make an effort to avoid products or services that cause environmental damage.
SCBs (4)	When buying foods, I pay attention to "fair trade labels" indicating that people growing and working in food production are treated fairly.
SCBs (5)	I will not buy a product if the company that sells it is ecologically irresponsible.
SCBs (6)	When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.
SCBs (7)	I make an effort to buy products and services from companies that pay all their employees a living wage.

CHAPTER 5

RESULTS

5.1. Chapter Outline

This chapter provides the statistical results of the conducted experiments outlined in the methodology chapter. It begins with the analysis of the validity and reliability of each construct used in this thesis (i.e., Materialistic Values Scale (MVS), Generative Altruism Scale (GALS), SCAs, and SCBs Scales). Afterwards, the results of the tests of proposed hypotheses are presented.

5.2. Validity and Reliability Analysis

To conduct confirmatory factor analysis (CFA), Analysis of Moment Structures (AMOS) 25 software is used in the study. CFA is considered an important analysis tool that is mainly used in social and behavioral studies. It can provide valuable information to the researcher regarding assessing the fit of the data and measurement model. It can also point out the weakness of specific items if there is any (Mishra, 2016). In this thesis study, CFA is utilized to test whether there is a sufficient correlation between predetermined factors and whether these factors are adequate to explain the previously developed conceptual model (Erkorkmaz et al., 2013). While developing a schematic diagram to perform CFA, every observed variable or item (e.g., M1, M2, M3, SCA1,...) is connected to its respective latent construct (e.g., MVS, GALS, ...) (Awang, 2014). By taking this into consideration, four similar CFA schematic diagrams were created to verify whether the three-factor structures used in the experiment can be verified with the collected data. After each diagram is created using AMOS 23, fit values were analyzed to assess whether the data is sufficient.

Baumgartner and Homburg (1996) provide one of the most comprehensive analyses of CFA by evaluating previous empirical applications in four major journals in the fields of consumer behavior and marketing with the aim of providing guidance to future users. In order to assess overall fit, there are several fit indices that justify

the validity of the data, and those indices are Goodness of Fit Index (GFI)¹⁰, Comparative Fit Index (CFI)¹¹, Root Mean Square Error of Approximation (RMSEA)¹², Chi-Square Mean/Degree of Freedom (CMIN/DF)¹³, Average Variance Extracted (AVE)¹⁴ and Composite Reliability (CR)¹⁵. For factor loading estimates, Hair et al. (2006) indicate that factor loading values greater than 0.6 indicate a correlation between variables and common latent factors. However, in further research, Hair et al. (2010) suggest that standardized factor loading estimates greater than 0.5 also should be reported as satisfactory. Also, several studies conducted in the field of consumer psychology indicate that factor loadings that are greater than 0.50 and less than 1.0 should be considered as a cut-off point for satisfactory loadings (Chen and Tsai, 2007; Truong and McColl, 2011). Thus, CFA was conducted to justify the validity of our data based on given standards and measures.

Experiment I. Validity and reliability analyses for Experiment I were done by splitting two cases which are clothing and cars based on brand names and product categories used in the study. Firstly, CFA was performed to test whether the three-factor structure of the cars case is justified with the collected data. As a result of our analysis, the fit values were found as follows: GFI= 0.82, CFI= 0.96, RMSEA= 0.07, CMIN/DF=1.41, Similarly, CFA analysis conducted for clothing case and fit indices

¹⁰ Baumgartner and Homburg (1996) mention that complexity of the data is one of the important factors that contributes to the contingent nature of GFI. Because of this, they propose that general rules of thumb which suggest that GFI must be greater than 0.90 might be misleading since it disregards mentioned factor. GFI fit indices range between 0 and 1 and values close to 1 indicates a good fit. While fit indices which are above 0.90 indicates an excellent fit, values exceeding 0.80 threshold also should be considered as acceptable (Schermelleh-Engel et al., 2003).

¹¹ CFI values exceeding 0.9 indicates sufficient fit with the data.

¹² Baumgartner and Homburg (1996) indicates that values ranging between 0.05 and 0.08 for RMSEA reports sufficient fit with the data for the consumer research. However, as variability in the model increases, there is a high chance that RMSEA values are more likely to fall outside of the accepted ranges (Erkorkmaz et al., al., 2013). Baumgartner and Homburg (1996) also note that only 58% of studies in consumer behavior have RMSEA of values less than 0.05 while 23% of the studies had reported values greater than 0.08. Due to this, significant number of published models fail to meet what Browne and Cudeck (1993) call an excellent fit. However, Browne and Cudeck (1993) emphasizes that although RMSEA values less than 0.05 would point a close and excellent fit on the model, they state that RMSEA of 0.08 or less than 0.08 should also be reported as a sufficient fit. Moreover, values greater than 0.1 should not be considered as acceptable (Hooper et al, 2008).

¹³ CMIN/DF < 3 are threshold limit of values for satisfactory fit.

¹⁴ AVE ≥ 0.50 are threshold limit of values for satisfactory fit.

¹⁵ CR ≥ 0.70 are threshold limit of values for satisfactory fit.

are provided as GFI= 0.82, CFI= 0.95, RMSEA= 0.07, CMIN/DF=1.47 respectively. Overall, both cases' fit values indicate that there is a good fit between collected data and measurement models for Experiment I. In addition to this, factor loadings of each item in both cases were found to be greater than the threshold limit of 0.60 and between the range of -1 and 1 (Hair et al., 2006) which explains that the variance of respective latent constructs both for clothing and car case are significant and sufficient. For cars case, the standardized factor loadings of the items in the model varied between 0.61 and 0.89 (see Table 5.1.) while they varied between 0.64 and 0.92 for clothing case (see Table 5.2.).

Furthermore, a discriminant validity check was done by examining the covariance paths that were constructed between two exogenous constructs (see Figure 5.2. and Figure 5.3.). Awang (2014) suggests that any values that do not exceed the threshold limit of 0.85 indicate that discriminant validity is likely to exist between two exogenous constructs. As can be seen from Figures 5.1. and 5.2., for both cases, the discriminant validity between two constructs is below 0.85 and 1.00 which demonstrates that the measures used in this study are discriminated from each other, and there are no multicollinearity issues with the data.

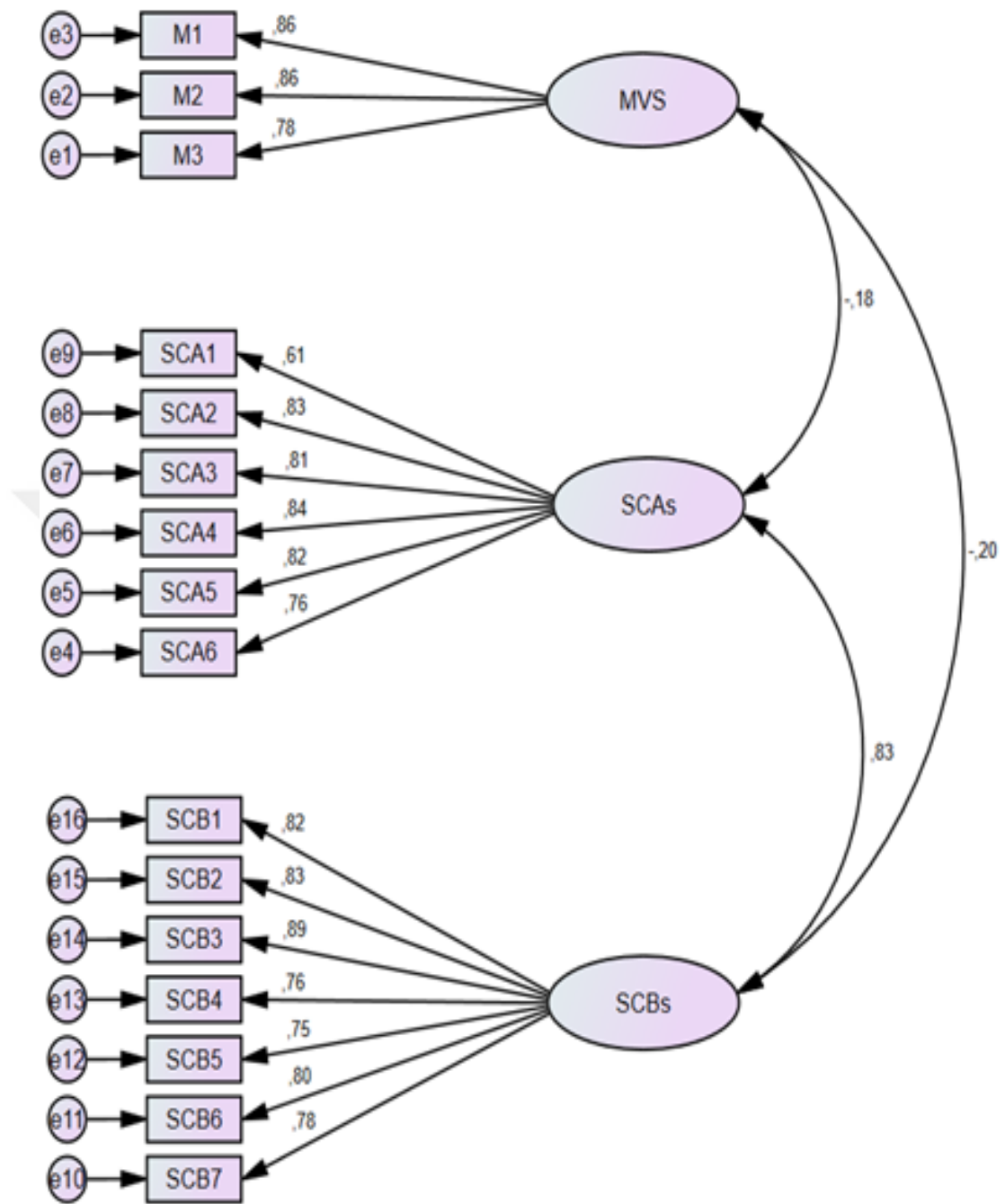


Figure 5.1. CFA model for cars case

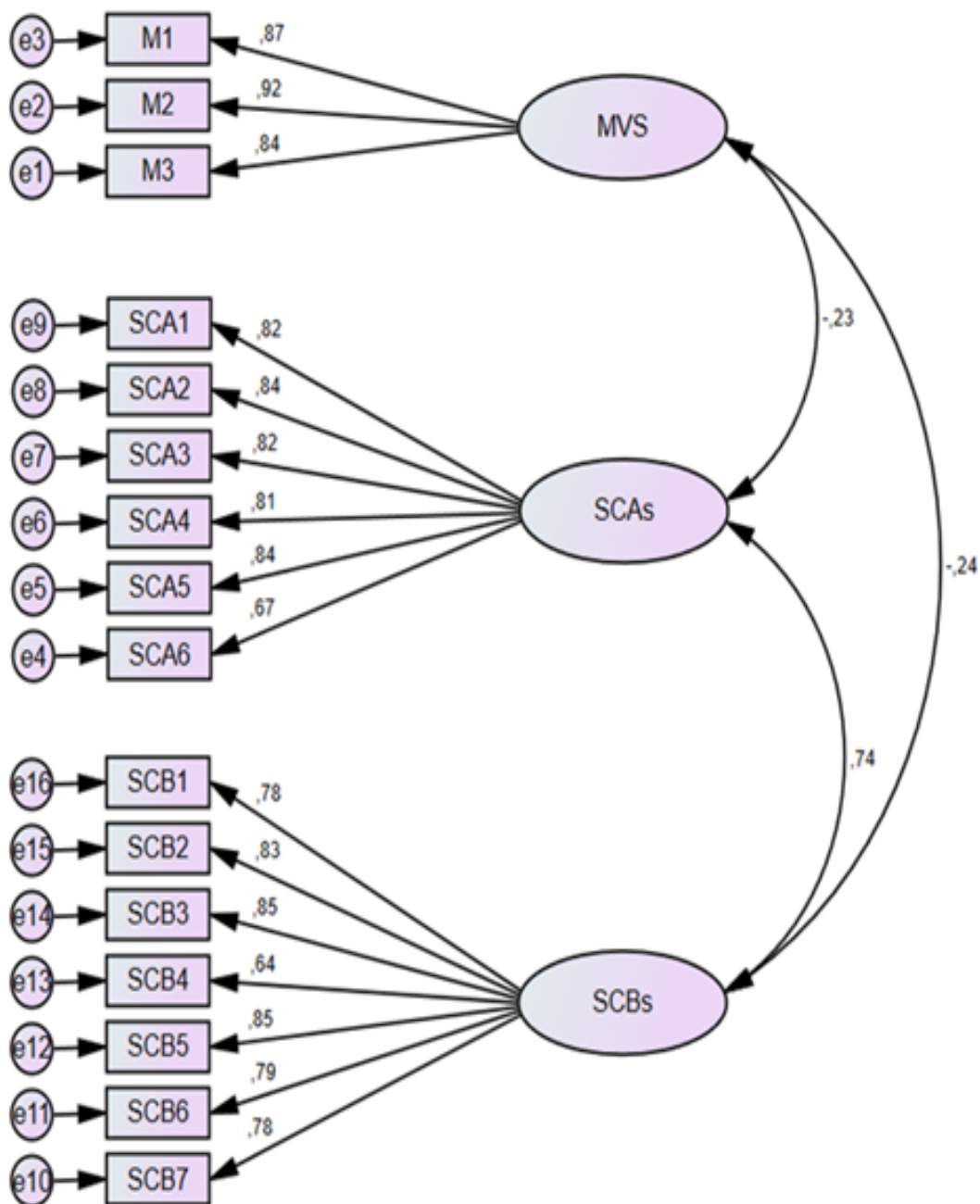


Figure 5.2. CFA model for clothing case

Further tests were carried out to confirm convergent validity and composite reliability (CR). In order to measure convergent validity, average variance extracted (AVE) scores were calculated to verify good internal consistency and reliability. According to Fornell and Larcker (1981), AVE scores are calculated based on a given formula:

$$AVE = \frac{\sum_{i=1}^n (\lambda_i)^2}{n}$$

In AVE equations, λ represents the standardized factor loadings, while n is the total number of items in a construct. Different from AVE formula, CR formula includes an additional variable, ϵ , which indicates the error variance. Furthermore, CR scores in our study are computed by a formula given below:

$$CR = \frac{\sum_{i=1}^n (\lambda_i)^2}{\sum_{i=1}^n (\lambda_i)^2 + \sum_{i=1}^n (\epsilon_i)}$$

For our developed constructs for the two cases, AVE scores for cars case ranged between 0.61 and 0.70. Similarly, for clothing case, the values varied between 0.62 and 0.77. On the other hand, CR scores for the given two schematic diagrams are reported between 0.87 and 0.91 for cars case while they ranged between 0.91 and 0.92 for clothing case (see Table 5.1., Table 5.2.). When the results are examined, internal reliability standards (AVE > 0.50 and CR > 0.70) are satisfied. In addition to this, for each factor, the fit validity condition (CR > AVE) was also found to be sufficient. According to these results, convergent validity and CR of all constructs are at a satisfactory level, being greater than threshold limit values of both AVE and CR (Hair et al., 2006; Malhotra, 2007).

Moreover, a Cronbach's alpha score for each scale used in the experiment was calculated to determine the reliability, using SPSS; scores are reported in Table 5.1. and Table 5.2. According to Table 5.1. alpha scores for cars case are reported as $MVS(\alpha_{cars}) = 0.87$, $SCAs(\alpha_{cars}) = 0.90$, $SCBs(\alpha_{cars}) = 0.93$. For clothing case, $MVS(\alpha_{clothing}) = 0.91$, $SCAs(\alpha_{clothing}) = 0.91$, $SCBs(\alpha_{clothing}) = 0.92$ are reported, respectively (see Table 5.2.). According to Nunnally (1978), alpha coefficients should be higher than 0.70 to satisfy reliability constraints. For both cases, the

coefficients of each measurement used in the study were greater than 0.70 and this indicates that the reliability of scales was satisfactory to meet the suggested criteria.

Table 5.1. Validity and Reliability Results for Cars Case

Factor	Factor load	α	CR	AVE
MVS				
MVS1	0.86***			
MVS2	0.86***	0.87	0.87	0.70
MVS3	0.78***			
SCAs				
SCA1	0.61***			
SCA2	0.83***			
SCA3	0.81***			
SCA4	0.84***	0.90	0.91	0.61
SCA5	0.82***			
SCA6	0.76***			
SCBs				
SCB1	0.82***			
SCB2	0.83***			
SCB3	0.89***			
SCB4	0.76***	0.93	0.93	0.65
SCB5	0.75***			
SCB6	0.80***			
SCB7	0.78***			

Table 5.2. Validity and Reliability Results for Clothing Case

Factor	Factor load	α	CR	AVE
MVS				
MVS1	0.87***	0.91	0.91	0.77
MVS2	0.92***			
MVS3	0.84***			
SCAs				
SCA1	0.82***	0.91	0.9	0.65
SCA2	0.84***			
SCA3	0.82***			
SCA4	0.81***			
SCA5	0.84***			
SCA6	0.67***			
SCBs				
SCB1	0.78***	0.92	0.92	0.62
SCB2	0.83***			
SCB3	0.85***			
SCB4	0.64***			
SCB5	0.85***			
SCB6	0.79***			
SCB7	0.78***			

Experiment II. A similar approach was followed to analyze validity and reliability by examining two cases used in experiment II, Starbucks, and Toyota. In order to assess the fitness of the three-factor structure with the collected data, CFA is utilized. Based on our analysis, fit values are observed as follows for Starbucks case: GFI= 0.86 CFI= 0.98, RMSEA= 0.04, CMIN/DF=1.14. A similar analysis was conducted for the Toyota case, with the following results found: GFI= 0.83, CFI= 0.92, RMSEA= 0.08, CMIN/DF=1.74, respectively. Looking at these, overall results indicated that the collected data has a good fit with our developed model in experiment II. Besides, it is important to note that our GFI indices for both cases are below 0.90; however, as stated by several scholars in the field of consumer psychology, any value ranging between 0 and 1 should be considered as satisfactory and values close to 0.90 indicates a good fit between data and the model (Baumgartner and Homburg, 1996; Browne and Cudeck, 1993; Hooper et al., 2008; Schermelleh-Engel et al., 2003; Sharma and Chandni, 2017). Based on our analysis, in Starbucks case, only one factor loading is found (SCB4 → SCBs) =0.58 and in Toyota case a correlation between SCA1 and SCAs (SCA1→SCAs) = 0.59 was lower than 0.60. All other factor loadings were found to be greater than 0.6 which significantly justify the variance of each item to their respective latent. However, those two factor loadings which are SCB4→SCBs and SCA1→SCAs should also be considered as satisfactory since they are greater than 0.50 and less than 1.0 (Chen & Tsai, 2007; Hair et al., 2010; Truong and McColl, 2011). Overall, In Starbuck's case, the factor loading for each item varied between 0.58 and 0.89 (see Figure 5.3.) while it ranged between 0.59 and 0.93 (see Figure 5.4.). Lastly, to confirm discriminant validity, values between two exogenous constructs are investigated and all values used in the two cases did not exceed 0.85 which is the threshold limit for discriminant validity.

Additional tests were carried out to justify convergent validity and composite reliability. For the Starbucks case, AVE scores are found to range between 0.55 and 0.73, while the range is between 0.57 and 0.72 for Toyota case. On the other hand, CR scores for Starbucks and Toyota cases are reported as between 0.88 and 0.91; 0.88 and 0.91, respectively. By taking those values into consideration, it can be

confidently stated that internal reliability standards ($AVE > 0.50$ and $CR > 0.70$) are met while fit validity conditions are also found satisfactory for both cases ($CR > AVE$).

Further analysis was conducted to determine reliability by calculating Cronbach's alpha scores for each scale used in Experiment II. According to Table 5.3., alpha scores for cars case were calculated as $GALS(\alpha_{starbucks}) = 0.92$, $SCAs(\alpha_{starbucks}) = 0.89$, $SCBs(\alpha_{starbucks}) = 0.90$. For Toyota case, they are found as follows: $GALS(\alpha_{toyota}) = 0.91$, $SCAs(\alpha_{toyota}) = 0.88$, $SCBs(\alpha_{toyota}) = 0.90$, respectively. For all cases, alpha scores are greater than 0.70 for all constructs which indicate that scales used in the study are reliable, as suggested by Nunnally (1978).

This section of the thesis attempted to investigate validity and reliability for the collected data and developed models for each case used in two experiments. Our analysis reveals that both for experiment I and experiment II, validity and reliability is deemed accepted based on standards from previous literature. Further analyses were conducted to test hypotheses developed in this thesis; the next section will provide our results regarding these hypothesis tests.

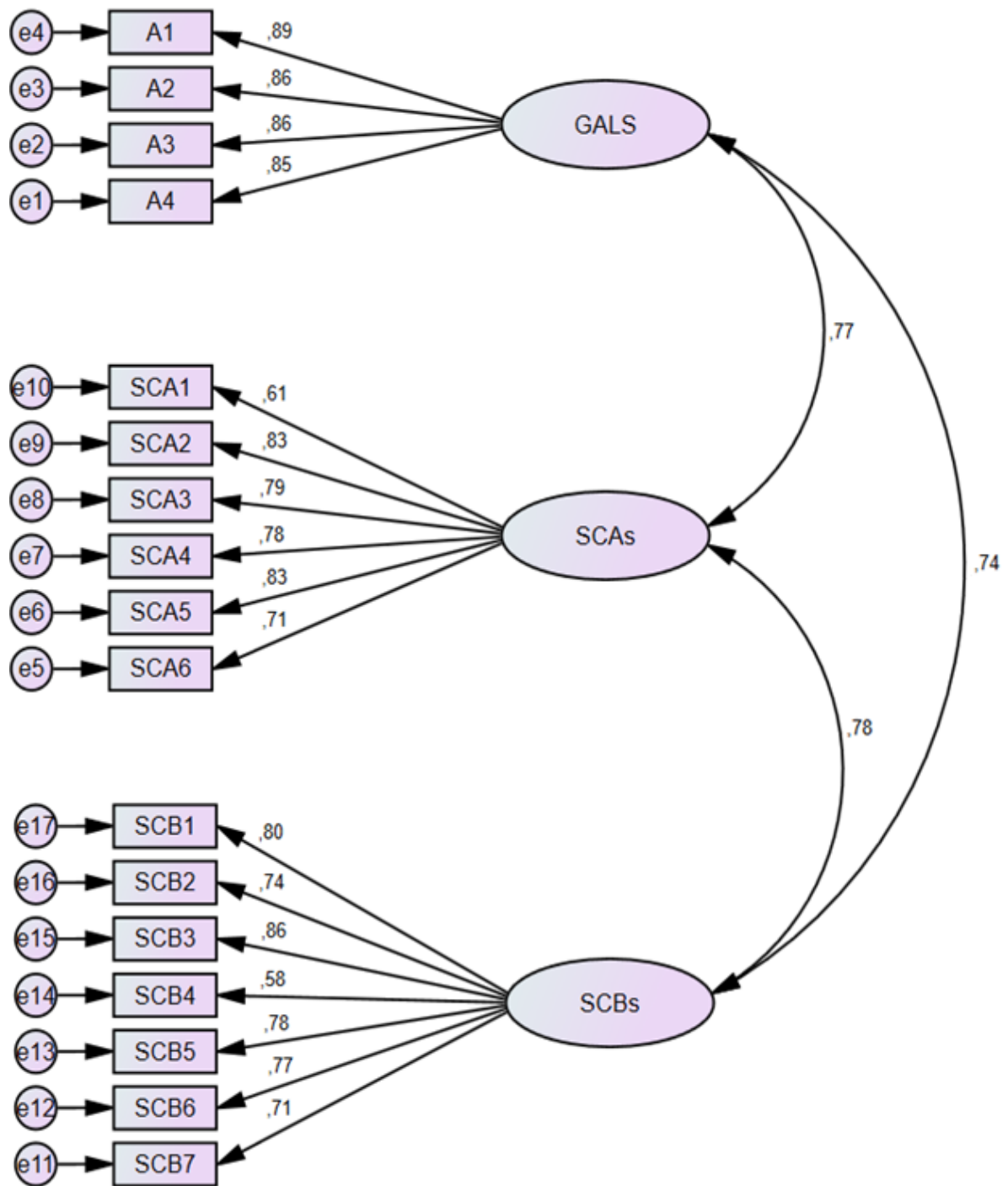


Figure 5.3. CFA model for Starbucks Case

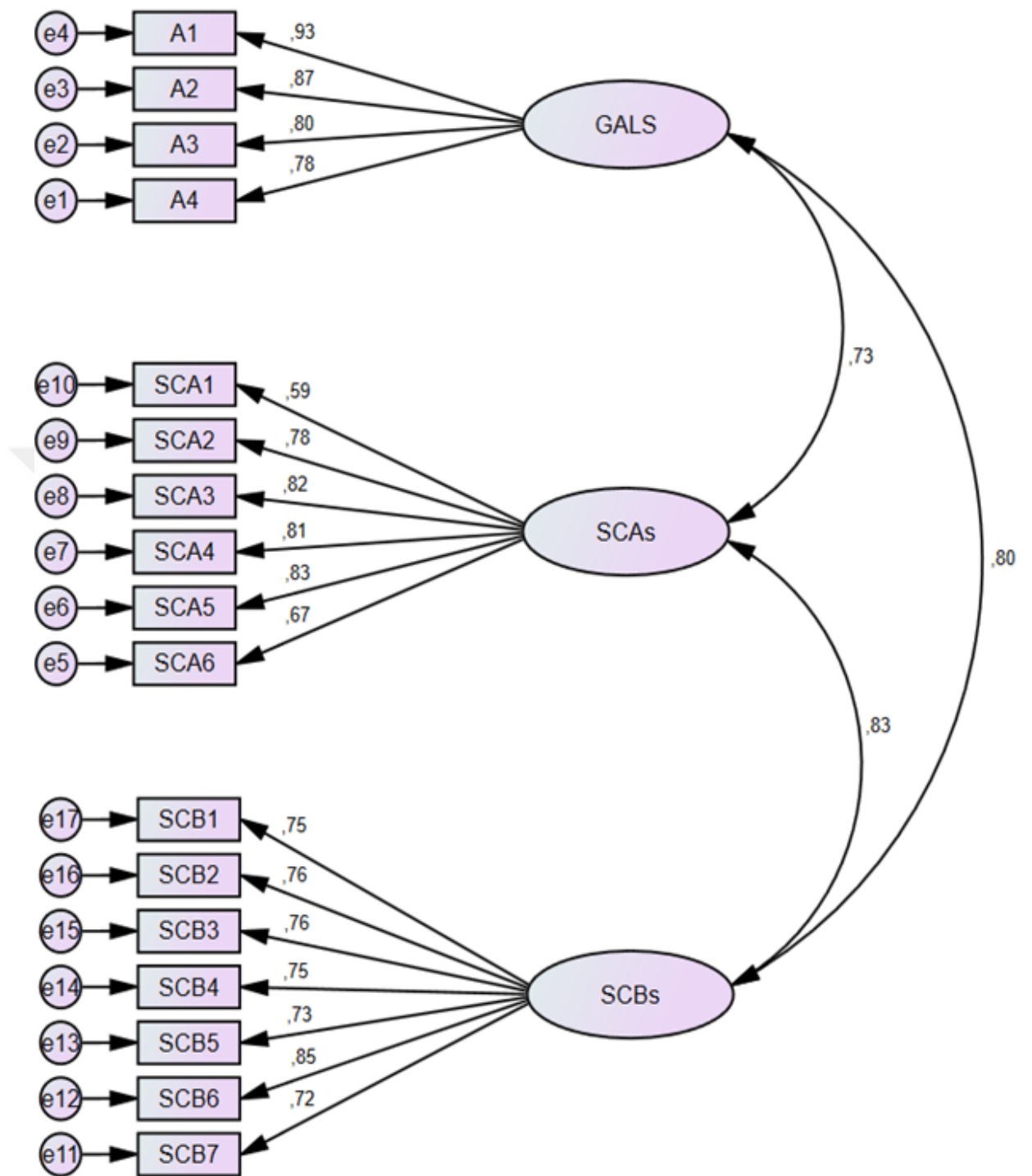


Figure 5.4. CFA model for Toyota case

Table 5.3. Validity and reliability results for starbucks case

Factor	Factor load	α	CR	AVE
GALS				
GALS1	0.89***	0.92	0.91	0.73
GALS2	0.86***			
GALS3	0.86***			
GALS4	0.85***			
SCAs				
SCA1	0.61***	0.89	0.88	0.56
SCA2	0.83***			
SCA3	0.79***			
SCA4	0.78***			
SCA5	0.83***			
SCA6	0.71***			
SCBs				
SCB1	0.81***	0.90	0.89	0.55
SCB2	0.74***			
SCB3	0.86***			
SCB4	0.58***			
SCB5	0.78***			
SCB6	0.77***			
SCB7	0.71***			

Table 5.4. Validity and reliability results for toyota case

Factor	Factor load	α	CR	AVE			
GALS							
GALS1	0.93***	0.91	0.91	0.72			
GALS2	0.87***						
GALS3	0.80***						
GALS4	0.78***						
SCAs							
SCA1	0.59***	0.88	0.89	0.57			
SCA2	0.78***						
SCA3	0.82***						
SCA4	0.81***						
SCA5	0.83***	0.91	0.91	0.58			
SCA6	0.67***						
SCBs							
SCB1	0.75***						
SCB2	0.76***	0.91	0.91	0.58			
SCB3	0.76***						
SCB4	0.75***						
SCB5	0.73***						
SCB6	0.85***	0.91	0.91	0.58			
SCB7	0.72***						

Table 5.5. Summary of validity and reliability tests

Experiment I			Experiment II	
	Cars Case	Clothing Case	Starbucks Case	Toyota Case
GFE	0.82	0.82	0.86	0.83
CFI	0.96	0.95	0.98	0.92
RMSEA	0.07	0.07	0.04	0.08
CMIN/DF	1.41	1.74	1.14	1.74

Experiment I				Experiment II		
		Cars Case	Clothing Case		Starbucks Case	Toyota Case
AVE	MVS	0.70	0.77	GALS	0.73	0.72
	SCAs	0.61	0.65	SCAs	0.56	0.57
	SCBs	0.65	0.62	SCBs	0.55	0.58
CR	MVS	0.87	0.91	GALS	0.91	0.91
	SCAs	0.91	0.92	SCAs	0.88	0.89
	SCBs	0.93	0.92	SCBs	0.89	0.91
α	MVS	0.87	0.91	GALS	0.92	0.91
	SCAs	0.9	0.91	SCAs	0.89	0.88
	SCBs	0.93	0.92	SCBs	0.9	0.91
CR>AVE		Satisfied	Satisfied		Satisfied	Satisfied

5.3. Hypotheses Testing

Our experimental designs for experiment I and II consisted of two conditions: prime and no-prime, as stated in the earlier chapters of this thesis (see Chapter 4.1, 4.2). In order to compare two means of two groups and to determine whether there is statistical evidence that indicates a significant difference, independent samples t-test is utilized by using SPSS version 22.

5.3.1. Testing Hypotheses 1a and 1b

Hypotheses 1a and 1b state that priming people with luxury brand concepts activates materialistic values which will lead to unsustainable consumption attitudes and behaviors. In order to test the difference between prime and no-prime conditions, independent samples t-test was conducted for cars and clothing brands.

Clothing Case. According to our t-test analysis for clothing case manipulation check in experiment I (see Table 5.6.), the findings indicate that the clothing brands used in the prime condition are perceived as luxury, as the results show a significant difference between the means of luxury and regular brand concepts. The luxury perception was significantly higher in the luxury brand concept ($M=4.54$) than the regular brand concept ($M=1.60$), $t= 14.4$, $p= .000$. This finding indicates that brands used in our study as stimuli are interpreted correctly, and prestigious brand names are perceived as luxury brands, as intended.

Table 5.6. Independent samples t-test Results: Clothing case manipulation check

	Brand Concept	N	Mean	DF	t	Sig.
Luxury Perception	Luxury	39	4.54	77	14.4	0.00
	Regular	40	1.60			

Significant level of $p<0.05$

After ensuring that manipulation used in the prime condition was successful, an additional t-test was conducted to see whether a significant difference existed between prime (luxury brand concept) and no prime (regular brand concept) conditions. The results from independent samples t-test (see Table 5.7.) indicate that

in the prime condition, luxury brand concept leads to activation of materialistic values, as there is a higher score in the mean for luxury brand concept condition ($M_{\text{luxury}}=11.78 > M_{\text{regular}}=8.23$), $t(78)=5.70$, $p=0.00 < 0.05$. According to table 5.7., For SCAs Scale, there is only a marginally significant difference between the scores for prime ($M=16.47$, $SD=4.47$) and no-prime ($M=18.57$, $SD=5.75$) conditions, $t(78)=1.82$, $p=0.07 > 0.05$. Although the difference between two means just failed to reach significance, it can be seen that participants in prime conditions scored lower for SCAs in prime condition. For SCBs Scale, a significant difference in the scores for prime ($M=18.45$, $SD=4.36$) and no-prime ($M=21.70$, $SD=7.07$) conditions exists; $t(78)=2.47$, $p=0.02 < 0.05$. Thus, these findings justify that being exposed to brand stimuli such as luxury brand concept which are associated with hedonic lifestyle, can activate materialistic values. When materialistic values are activated, since they are one of the main drivers of unsustainable consumption behaviors, individuals' subsequent behaviors regarding sustainability are affected in the direction of the primed context.

Table 5.7. Independent samples t-test results: Clothing case hypotheses tests

	Brand Concept	N	Mean	SD	DF	t	Sig.
MVS	Luxury	40	11.78	2.34	78	5.7	0.00
	Regular	40	8.23	3.10			
SCAs	Luxury	40	16.47	4.47	78	1.82	0.07
	Regular	40	18.57	5.75			
SCBs	Luxury	40	18.45	4.36	78	2.47	0.02
	Regular	40	21.70	7.07			

Significant level of $p < 0.05$

Cars Case. Table 5.8. illustrates our analysis of independent samples t-test for the cars case manipulation check. The table reveals that a significant difference ($t=10.42$, $p=.000$) between prime and no-prime conditions exists. In prime

conditions, all car brand names used in the prime condition are perceived as luxury which justifies that manipulation was successful due to a significant difference between means of two conditions ($M_{\text{luxury}} = 4.6 > M_{\text{regular}} = 2.3$).

Table 5.8. Independent samples t-test Results: Cars case manipulation check

	Brand Concept	N	Mean	DF	t	Sig.
Perception	Luxury	40	4.6	78	10.42	0.00
	Regular	40	2.3			

Significant level of $p < 0.05$

After demonstrating the successful implementation of the manipulation, further analysis was performed to test the hypothesis. Our results, shown in Table 5.9., reveal that being primed with the luxury brand concepts evoked materialistic values, as there is a significant difference in the means between prime and no prime conditions, $M_{\text{luxury}}=12.20 > M_{\text{regular}}=9.30$, $t(78) = 4.59$, $p=0.00 < 0.05$. Next we examined the means between SCAs and SCBs. Based on our analysis, we can conclude that a significant difference was observed between prime ($M=17.65$, $SD=5.20$) and no prime ($M=20.42$, $SD=4.91$) conditions; $t(78)=2.45$, $p=0.02 < 0.05$ for SCAs. Consecutively, t-test results also reveal that difference exists in the means for SCBs between prime ($M=18.77$, $SD=5.74$) and no-prime ($M=22.30$, $SD=5.62$) conditions at a significant level: $t(78)=2.77$, $p=0.01 < 0.05$. Thus, our findings support hypotheses 1a and 1b.

Table 5.9. Independent samples t-test results: Cars case hypotheses tests

	Brand Concept	N	Mean	SD	DF	t	Sig.
MVS	Luxury	40	12.20	2.28	78	4.59	0.00
	Regular	40	9.30	3.27			
SCAs	Luxury	40	17.65	5.20	78	2.45	0.02
	Regular	40	20.42	4.91			
SCBs	Luxury	40	18.77	5.74	78	2.77	0.01
	Regular	40	22.30	5.62			

Significant level of $p < 0.05$

Our findings revealed a significant difference for each condition used in Experiment I, supporting hypotheses 1a and 1b. Hypothesis 1a was not supported in the clothing case, however the means were in the correct direction and the significance level for the t-test was marginal. However, considering the overall results, it can be concluded that participants primed with the luxury brand concept scored significantly higher than those in the no-prime condition. As stated earlier, as materialism is negatively related to SCAs and SCBs, we hypothesized that people who score higher in materialism will be less likely to engage in SCAs and SCBs. According to table 5.7 and 5.9, this argument was consistent with previously developed studies in the field of environmental psychology. Our independent samples t-test analysis indicates that being primed with luxury brand concept activates materialistic values and, in turn, individuals' subsequent SCAs and SCBs are influenced, as hypothesized.

5.3.2. Testing Hypotheses 2a and 2b

Hypotheses 2a and 2b propose that priming people with sustainable brand concepts activates altruistic values which will increase sustainable consumption attitudes and behaviors. To analyze these hypotheses, a similar approach to the one used in experiment I was applied. In order to determine whether there is a difference

between prime and no-prime conditions, independent samples t-test was utilized for two cases: Starbucks and Toyota.

Starbucks Case. In order to understand if participants interpreted the given text in the prime condition correctly (that is, as if the brand concept is perceived as sustainability-oriented), a manipulation check was conducted, comparing the means between the two conditions using an independent samples t-test. Our results revealed that participants in prime condition where sustainability-positioned brand information is provided scored significantly higher ($M=4.17$, $SD=1.00$) than participants in the no-prime condition ($M=2.95$, $SD=1.48$), $t(77)=14.4$, $p=0.00<0.005$ (see Table 5.10.). Thus, we conclude that the manipulation worked as intended.

Table 5.10. Independent samples t-test results: Starbucks case manipulation check

	Brand Concept	N	Mean	DF	t	Sig.
Brand Perception	Sustainable	40	4.17	77	14.4	0.00
	Regular	40	2.95			

Significant level of $p<0.05$

Subsequently, hypotheses tests were conducted. According to table 5.11 which presents the results of a t-test of the Starbucks case for the altruism scale, subjects in prime condition scored higher than participants in the no-prime condition at a significant level ($M_{\text{sustainable}}=16.77>M_{\text{regular}}=12.90$), $t(78)=5.55$, $p=0.00<0.05$. This indicates that successful stimuli implementation in Starbucks case activates altruistic values for individuals who participated in our study. Followed by this, additional tests were conducted to see whether altruistic values lead to SCAs and SCBs. Results demonstrate that our expectations were justified and a significant difference exists for SCAs between the prime ($M=22.80$, $SD=2.91$) and no-prime condition ($M=18.80$, $SD=4.39$) at a significant level, $t(78)=4.39$, $p=0.00<0.05$. Moreover, t-test results for the Starbucks case reveal that a significant difference exists in the

means for SCBs between prime (M=26.15, SD= 4.04) and no-prime (M=20.02, SD= 5.59) conditions: $t(78)=5.60$, $p=0.00<0.05$.

Table 5.11. Independent samples t-test results: Starbucks case hypotheses tests

	Brand Concept	N	Mean	SD	DF	t	Sig.
Altruism Scale	Sustainable	40	16.77	2.30	78	5.55	0.00
	Regular	40	12.90	3.76			
SCAs	Sustainable	40	22.80	2.91	78	4.39	0.00
	Regular	40	18.80	4.95			
SCBs	Sustainable	40	26.15	4.04	78	5.60	0.00
	Regular	40	20.02	5.59			

Significant level of $p<0.05$

Toyota Case. A manipulation check was conducted to examine whether participants interpreted the primed brand concept correctly (that is, as a sustainability-positioned brand). Results shown in Table 5.12. indicate that there is a significant difference between the two means ($p<0.000$). Subjects who read the sustainability-positioned brand information in the prime condition reported higher scores (M=4.56) on how sustainable the brand is, compared to subjects in the no-prime condition (M=2.22). This finding indicates that subjects correctly perceived the primed brand concept as sustainable, and the manipulation worked as intended.

Table 5.12. Independent samples t-test results: Toyota case manipulation check

	Brand Concept	N	Mean	DF	t	Sig.
Brand Perception	Sustainable	40	4.56	79	11.4	0.00
	Regular	41	2.22			

Significant level of $p<0.05$

According to Table 5.13., a significant difference between prime and no-prime condition on the altruism measure shows that priming people with sustainable brand concept activates altruistic values ($M_{\text{sustainable}}=16.19 > M_{\text{regular}}=10.57$), $t(79)=8.78$, $p=0.00 < 0.05$. Afterward, additional analyses were conducted to investigate how altruistic values which are activated as a result of brand priming can influence SCAs and SCBs. As can be read from Table 5.13., when means for two conditions were compared on SCAs, it can be seen that scores in the prime condition ($M=16.87$, $SD=2.93$) were higher than the no-prime condition ($M=16.87$, $SD=4.62$), and this difference was significant, $t(79)=7.55$; $p=0.00$. Similarly, a significant difference exists for SCBs between the prime ($M=25.29$, $SD=4.13$) and no-prime condition ($M=18.10$, $SD=4.71$) at a significant level, $t(79)=7.30$, $p=0.00 < 0.05$. According to these results, the difference between each condition for both cases is significant. Thus, hypotheses 2a and 2b are supported: priming people with a sustainability brand concept evoked their altruistic values which, in turn, increased their SCAs and SCBs.

Table 5.13. Independent samples t-test results: Toyota case hypotheses tests

	Brand Concept	N	Mean	SD	DF	t	Sig.
Altruism Scale	Sustainable	41	16.19	2.60	79	8.78	0.00
	Regular	40	10.57	3.13			
SCAs	Sustainable	41	23.36	2.93	79	7.55	0.00
	Regular	40	16.87	4.62			
SCBs	Sustainable	41	25.29	4.13	79	7.30	0.00
	Regular	40	18.10	4.71			

Significant level of $p < 0.05$

CHAPTER 6

DISCUSSION AND CONCLUSIONS

6.1. Chapter Outline

This chapter provides a brief summary of the thesis by specifying research aims and statistical results that are obtained in this study. Following this, the discussion proceeds by indicating research contributions and research implications. Next, the research limitations are specified, and conceivable future research avenues are presented.

6.2. Effects of Brand Priming on Sustainable Consumption Attitudes and Behaviors

To our knowledge, this thesis is one of the very first studies which uses brand priming to influence SCAs and SCBs by activating materialistic and altruistic values. Previous studies in the sustainable consumer psychology literature tend to examine higher-order values by assuming that they do not change by factors coming from the environment. They also predicate their studies on assuming that those factors are motivated intrinsically, which we demonstrate is not always the case. We are living in an era of advanced technology, and consumer's decisions are also influenced by various factors that are continually coming from the environment. Some of those external factors, so-called primes, are used very often in brands' marketing strategies to influence consumers' subsequent behaviors. By being exposed to those primes, consumers may develop judgments, beliefs, and feelings which may affect their behaviors in the primed context. As a result of this, consumers may exhibit consumption decisions that differ from their overall value systems, personality traits, beliefs, and demographical characteristics, perhaps even to the point of contradiction.

Since priming is often used in marketing, many scholars provided a baseline for establishing how a brand stimulus can influence subsequent consumer decisions, attitudes, and behaviors (Aggarwal and McGill, 2012; Alves et al., 2017; Baxter et al., 2018; Brasel and Gips, 2011; Brintazzoli et al., 2012; Fitzsimons et al., 2008;

Irmak et al., 2005; Maher and Hu, 2003; Mantovani and Galvão, 2016). However, as stated earlier, none of these researchers examined how priming influences SCAs and SCBs. To our knowledge, priming methodology is only utilized in Mazar and Zhong's research (2010), where individuals were exposed to a green product concept to activate altruistic values with the purpose of influencing prosocial behaviors. However, their study reveals contradicting results. In their study, first, they use the green concept to evoke altruistic values and then measure participants' cooperativeness, which illustrates prosocial behaviors. They found that people who were exposed to a green product concept were much more cooperative than other participants who did not receive the prime. Afterwards, in a subsequent experiment, they give participants money to observe whether they will split the money with other participants. By doing so, their aim was to measure prosocial behaviors like helping others, but their study has one major flaw which should be noted. Past research has shown that touching, holding and even seeing money makes people more selfish and leads them to decrease prosocial and proenvironmental behaviors (Vohs et al., 2006; Zaleskiewicz et al., 2009). Due to this effect, their study might report contradicting results while examining the relationship between altruism and prosocial behaviors. Although this study yielded results that conflict with the majority of research investigating the relationship between altruism and sustainability, their study effectively demonstrates how a stimulus associated with sustainability can activate altruistic values. This demonstration has helped future studies like ours during the research development process.

Hypotheses developed in our study propose that priming people with sustainable brand concepts activates their altruistic values which will increase sustainable consumption attitudes and behaviors. Statistical evidence that were obtained as a result of our analyses supported our hypotheses, and people who are being primed with sustainable brand concept reported higher scores for sustainable consumption attitudes and behaviors. Our findings were also consistent with the majority of research claiming the positive relationship between altruism and sustainability. Furthermore, our study goes beyond and reveals that altruistic values can also be influenced by a brand stimulus. Thus, since altruism and sustainability are positively

related, individuals generate favorable attitudes towards sustainable consumption and may be more likely to perform sustainable consumption attitudes and behaviors.

Our other hypotheses developed in this study aimed to understand how a marketing stimulus such as the luxury brand concept can influence sustainable consumption attitudes and behaviors by triggering materialistic values. There are many studies in the consumer behavior literature revealing that brand names can arouse more interest for materialistic individuals (Campbell et al., 2011; Sharda and Bhat, 2018; Zhang and Shrum, 2009). Either their subsequent consumption behaviors are influenced by the brand, or materialistic people specifically prefer prestigious brands as a symbol of status and prestige. Furthermore, some scholars examined the relationship between consumers' materialistic values by considering them as an internal mechanism and assessed their responses towards the various type of brand advertisements (Maher and Hu, 2003). In their study, Maher and Hu (2003) found that being exposed to an advertisement context that promotes a materialistic lifestyle can play an active role in forming materialistic values. Since those two concepts are strongly related to each other, we predicted that exposing participants to the luxury brand concept can activate materialistic values. In addition to this, well-established literature on the relationship between materialism and sustainability also provided us a baseline while developing the hypotheses. Thus, our findings support our developed hypotheses: that exposure to a luxury brand concept activates materialistic values, which decreased sustainable consumption attitudes and behaviors.

By conducting two similar yet not identical experiments, the current thesis provides a deeper understanding of the effects of brand priming by highlighting factors influencing SCAs and SCBs. Our findings for the two experiments imply that people's value systems can be activated as a result of exposure and their subsequent sustainable consumption attitudes and behaviors are influenced by the primed context. These findings have important implications for both research and applied settings, which we will outline below.

6.3. Research Contributions and Implications

This study combines various findings and methods from different fields such as cognitive psychology, environmental psychology, marketing, and consumer behavior. One of the main goals in this study was to reveal mechanisms underlying how brand priming may influence sustainable consumption attitudes and behaviors by conducting two experiments. While investigating the priming effects on SCAs and SCBs, the current thesis focuses on the effects of the stimulus rather than focusing on enduring factors. As discussed previously, the majority of studies conducted in environmental psychology tend to focus on enduring factors of consumers, although they are not the only motivators and drivers of sustainable consumption attitudes and behaviors. This study attempts to fill this gap by demonstrating that environmental cues given in the situational context can activate green-related values and influence individuals' subsequent sustainable consumption attitudes and behaviors.

Moreover, the current thesis provides a valid and reliable scale that measures altruism, materialism, sustainable consumption attitudes and behaviors by including items from previously developed scales. The scales used in the thesis are developed based on definitions of each concept and their relationship with each other by specifying common characteristics between conceptually related concepts. This might help future researchers while examining similar concepts and provide them research directions.

In terms of managerial contributions, brands can use the information provided in the study while developing proper marketing strategies to reach their target market. By referring to our findings, they can create more appropriate advertisements and brand strategies to enhance positive attitudes toward a specific brand. This study also gives direction to marketers about how the brand should be positioned to align with what the brand represents, and which cues may enhance consumers' sustainable consumption decisions. Our data may guide marketers by leading to innovative marketing strategies where they can modify brand slogans, names, and messages given their advertisements based on the specific features to attract their target market.

Overall, consumers are the key component in sustainable consumption, and in order to enhance sustainability, appropriate marketing strategies will help firms to achieve their goal of being sustainable.

Besides scholarly and managerial contributions, it is important to emphasize the potential public policy implications of this study. First of all, this study successfully demonstrates the negative and positive influences of exposure on individuals' sustainable consumption attitudes and behaviors. From a negative side, if individuals are exposed to the luxury brand concept, they will become more unsustainable, and this will make living a sustainable society more difficult. On the other hand, if brands can promote themselves as sustainable and consumers are exposed to brand messages that enhance sustainability, individuals can behave more altruistically. As a result, they can perform sustainable consumption attitudes and behaviors which will benefit the environment and society as a whole. In other words, the simple incidental exposure to various marketing stimuli, such as brand advertisements or even brand names, may have consequences for the consumers' mindset as they approach decisions with implications for sustainability.

6.4. Research Caveats and Calls for Future Research Avenues

This thesis presents key constructs which can be utilized in further research as well as some limitations. In the specific case of sustainable consumption, individuals can be primed with external brand stimuli in their daily lives on several occasions while seeing a brand advertisement on the TV about a green product, surfing on the internet, shopping, doing window-shopping, or actually buying sustainable products. On all of these occasions, does brand priming generate the same effect for sustainable consumption attitudes and behaviors? Or how do different product categories influence consumers' behaviors that relate to sustainability? In our study, we used cars, clothing, coffee, and hybrid car to measure the effects of brand priming on sustainable consumption attitudes and behaviors; however, future research may extend the number of products while investigating the priming effect. More research is needed to investigate the process by which nonconscious goals have an influence on subsequent behaviors.

Furthermore, researchers can use other brand names that may evoke green-related values and assess the priming effect on SCAs and SCBs. They may also use a brand that may evoke several associations in the consumer's mind and assess the priming effect for various cases. By doing so, researchers can understand whether consumers' behaviors are influenced by specific brand attributes and characteristics or by the context provided to them to influence emotions and judgments.

As potential boundary conditions, moderating factors in the conceptual relationships can be examined for experiments I and II. For example, wealthy people may already have the upper limit of materialistic values and may not respond as much as people in the middle or lower classes. As a result of this, people in the high class may not be sensitive toward luxury brand names. For Experiment II, education may be a moderating factor while interpreting the brand information. Since educated people are more knowledgeable about sustainability, they might easily interpret specific terms used while defining brands' and products' sustainable features. As a result, the prime might be more effective to them, while people who do not have much knowledge about sustainability may not be affected as much by the stimuli. Also, additional moderating factors can be identified for future studies and the relationships can be investigated.

Furthermore, this study measures the effects of brand priming on sustainable consumption attitudes and behaviors by using scales that are previously developed. As a future research avenue, consumers' actual tendencies to consume sustainably as a result of brand exposure can be observed in markets, stores, and online shopping websites, which may increase the generalizability of the research. By doing so, more accurate results can be obtained regarding the real purchasing decisions of consumers through conducting such observational research. It would also be interesting to conduct longitudinal studies that examine the effects of repeated brand priming over multiple periods to see if there are longer-term effects on people's value systems related to sustainability.

Moreover, field experiments can be conducted to detect changes in the sustainable consumption attitudes and behaviors as a result of the brand priming

effect which may provide more accurate results. For example, a brand advertisement can be given on a store which promotes materialistic lifestyle on a selected aisle and consumer's behaviors might be observed at regular intervals.

To conclude, this study provides further insights into the attitude-behavior gap in the context of sustainable consumption by conducting a multidisciplinary study from various fields such as cognitive psychology, environmental psychology, marketing, and consumer behavior. Previous studies had revealed that brands are one of the powerful influencers on consumers' subsequent behaviors. However, none of the research had attempted to study what could be the potential implications on sustainability. Our study fills this gap, and the results of our experiment reveals that brand stimulus is a powerful factor which has an influence on sustainable consumption attitudes and behaviors.

As a final note, sustainable marketing is more than just promoting sustainable products and generating revenues for firms by expanding the market. It tells a story about a brand, its history, and how it creates value for its customers, potential clients, and society as a whole. Sustainable marketing is a new way of conducting and pursuing marketing strategies. It encourages not only firms to acquire a more sustainable approach while performing business activities, but also aims to satisfy consumers' need and wants while protecting the environment and providing for the needs of future generations. Because of this, the influence of brands on consumers' decision should not be underestimated and underlying motivators of decision mechanisms should be investigated to create and pursue effective sustainable marketing strategies. Last but not least, there are enormous research avenues in this field, and our study had intended to bring a new way of thinking to environmental psychology literature and wishes to inspire future researchers.

REFERENCES

- Aarstad, J. (2013). Implicit attitudes turned upside down: How the Utøya massacre may have affected Norwegians' perceptions of the "Hussein" word. *SAGE Open*, 3(1), 1–7. <https://doi.org/10.1177/2158244013481479>
- Aggarwal, P., & McGill, A. L. (2012). When brands seem human, do humans act like brands? Automatic behavioral priming effects of brand anthropomorphism. *Journal of Consumer Research*, 39(2), 307–323. <https://doi.org/10.1086/662614>
- Ajzen, I. (1985). From Intentions to Actions: A Theory of Planned Behavior. In *Action Control*. https://doi.org/10.1007/978-3-642-69746-3_2
- Ajzen, I., & Fishbein, M. (1974). Factors Influencing Intentions and the Intention-Behavior Relation. *Human Relations*, 27(1), 1–15. <https://doi.org/10.1177/001872677402700101>
- Akehurst, G., Afonso, C., & Goncalves, H. (2012). Re-examining green purchase behaviour and the green consumer profile: New evidences. *Management Decision*, 50(5), 972–988. <https://doi.org/10.1108/00251741211227726>
- Alsmadi, S. (2007). Green marketing and the concern over the environment: Measuring environmental consciousness of Jordanian consumers. *Journal of Promotion Management*, 13(3–4), 339–361. <https://doi.org/10.1080/10496490802306905>
- Alves, C. A., Lopes, E. L., & Hernandez, J. M. da C. (2017). It Makes Me Feel So Good: An Experimental Study of the Placebo Effect Generated by Brands. *Journal of International Consumer Marketing*, 29(4), 223–238. <https://doi.org/10.1080/08961530.2017.1310645>
- Antil, J. H. (1984). Socially Responsible Consumers: Profile and Implications for Public Policy. *Journal of Macromarketing*, 4(2), 18–39. <https://doi.org/10.1177/027614678400400203>
- Ashikali, E. M., & Dittmar, H. (2012). The effect of priming materialism on women's responses to thin-ideal media. *British Journal of Social Psychology*, 51(4), 514–533. <https://doi.org/10.1111/j.2044-8309.2011.02020.x>
- Awang, Z. (2014). A handbook on SEM for academicians and practitioners: The

- step by step practical guides for the beginners. *Bandar Baru Bangi, MPWS Rich Resources*.
- Baker, M. J. (2013). Sustainability Marketing: A Global Perspective. *Social Business*.
- Balanli, Z., & Hesapçi, Ö. (2014). Sustainability campaigns and consumer involvement: Effects of altruism, locus of control, and long-term orientation. In *Handbook of Research on Developing Sustainable Value in Economics, Finance, and Marketing*. <https://doi.org/10.4018/978-1-4666-6635-1.ch002>
- Bar-Tal, D. (1986). Altruistic Motivation to Help: Definition, Utility and Operationalization. *Humboldt Journal of Social Relations*, 13(1/2), 3–14.
- Bargh, J. A., & Chartrand, T. L. (2000). Studying the mind in the middle: a practical guide to priming and automaticity research. In *Handbook of Research Methods in Social and Personality Psychology*.
- Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of Social Behavior: Direct Effects of Trait Construct and Stereotype Activation on Action. *Journal of Personality and Social Psychology*, 71(2), 230–244. <https://doi.org/10.1037/0022-3514.71.2.230>
- Batson, C. D., & Powell, A. A. (2003). Altruism and Prosocial Behavior. In *Handbook of Psychology* (pp. 463–484). <https://doi.org/10.1002/0471264385.wei0519>
- Baumgartner, H., & Homburg, C. (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International Journal of Research in Marketing*, 13(2), 139–161. [https://doi.org/10.1016/0167-8116\(95\)00038-0](https://doi.org/10.1016/0167-8116(95)00038-0)
- Baxter, S. M., Ilicic, J., & Kulczynski, A. (2018). Roses are red, violets are blue, sophisticated brands have a Tiffany Hue: The effect of iconic brand color priming on brand personality judgments. *Journal of Brand Management*, 25(4), 384–394. <https://doi.org/10.1057/s41262-017-0086-9>
- Becchetti, L., & Huybrechts, B. (2008). The dynamics of fair trade as a mixed-form market. *Journal of Business Ethics*, 81(4), 733–750. <https://doi.org/10.1007/s10551-007-9544-8>

- Belk, R. W. (1985). Materialism: Trait Aspects of Living in the Material World. *Journal of Consumer Research*, 12(3), 265. <https://doi.org/10.1086/208515>
- Belk, R. W. (1988). Possessions and the Extended Self. *Journal of Consumer Research*. <https://doi.org/10.1086/209154>
- Belz, F. M., & Peattie, K. J. (2013). Sustainability marketing: A global perspective. Second Edition. Chichester: Wiley.,
- Berger, J., & Fitzsimons, G. (2008). Dogs on the street, pumas on your feet: How cues in the environment influence product evaluation and choice. *Journal of Marketing Research*, 45(1), 1–14. <https://doi.org/10.1509/jmkr.45.1.1>
- Berkin, A. (2018). Cross-national examination of cultural values, belief systems, and sustainable consumer attitudes and behaviors. Master of Science Thesis, Middle East Technical University Northern Cyprus Campus. Retrieved from <http://etd.lib.metu.edu.tr/upload/12621897/index.pdf/>
- Bloch, P. H., & Richins, M. L. (1983). A Theoretical Model for the Study of Product Importance Perceptions. *Journal of Marketing*, 47(30), 161–187. <https://doi.org/10.1177/002224298304700308>
- Brasel, S. A., & Gips, J. (2011). Red Bull “Gives You Wings” for better or worse: A double-edged impact of brand exposure on consumer performance. *Journal of Consumer Psychology*, 21(1), 57–64. <https://doi.org/10.1016/j.jcps.2010.09.008>
- Bray, J., Johns, N., & Kilburn, D. (2011). An Exploratory Study into the Factors Impeding Ethical Consumption. *Journal of Business Ethics*, 98(4), 597–608. <https://doi.org/10.1007/s10551-010-0640-9>
- Brintazzoli, G., Soetens, E., Deroost, N., & Van den Bussche, E. (2012). Conscious, but not unconscious, logo priming of brands and related words. *Consciousness and Cognition*, 21(1), 824–834. <https://doi.org/10.1016/j.concog.2012.03.006>
- Browne, M. W., & Cudeck, R. (1993). Alternative Ways of Assessing Model Fit. *Sociological Methods & Research*. <https://doi.org/10.1177/0049124192021002005>
- Büssing, A., Kerksieck, P., Günther, A., & Baumann, K. (2013). Altruism in

- adolescents and young adults: Validation of an instrument to measure generative altruism with structural equation modeling. *International Journal of Children's Spirituality*, 18(4), 335–350.
<https://doi.org/10.1080/1364436X.2013.849661>
- Campbell, W. K., Miller, J. D., Sedikides, C., Cisek, S., & Hart, C. M. (2011). *Narcissism and Brand Name Consumerism*. 382–392.
- Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers. *Journal of Business Ethics*, 97(1), 139–158.
<https://doi.org/10.1007/s10551-010-0501-6>
- Chan, R. Y. K. (2001). Determinants of Chinese consumers' green purchase behavior. *Psychology and Marketing*, 18(4), 389–413.
<https://doi.org/10.1002/mar.1013>
- Charter, M., Peattie, K., Ottoman, J., & Polonsky, M. (2002). Marketing and Sustainability. *Centre for Business Relationships, Accountability, Sustainability and Society*, 225–239.
<https://doi.org/10.1002/9781119208501.ch11>
- Chen, C. F., & Tsai, D. C. (2007). How destination image and evaluative factors affect behavioral intentions? *Tourism Management*, 28(4), 1115–1122.
<https://doi.org/10.1016/j.tourman.2006.07.007>
- Chen, X., Peterson, M. N., Hull, V., Lu, C., Lee, G. D., Hong, D., & Liu, J. (2011). Effects of attitudinal and sociodemographic factors on pro-environmental behaviour in urban China. *Environmental Conservation*, 38(1), 45–52.
<https://doi.org/10.1017/S037689291000086X>
- Chen, Y. S., & Chang, C. H. (2013). Greenwash and Green Trust: The Mediation Effects of Green Consumer Confusion and Green Perceived Risk. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-012-1360-0>
- Crane, A. (2000). Facing the backlash: Green marketing and strategic reorientation in the 1990s. *Journal of Strategic Marketing*, 8(3), 277–296.
<https://doi.org/10.1080/09652540050110011>

- D'Souza, C., Taghian, M., & Khosla, R. (2007). Examination of environmental beliefs and its impact on the influence of price, quality and demographic characteristics with respect to green purchase intention. *Journal of Targeting, Measurement and Analysis for Marketing*.
<https://doi.org/10.1057/palgrave.jt.5750039>
- De Dominicis, S., Schultz, P. W., & Bonaiuto, M. (2017). Protecting the environment for self-interested reasons: Altruism is not the only pathway to sustainability. *Frontiers in Psychology*, 8(JUN), 1–13.
<https://doi.org/10.3389/fpsyg.2017.01065>
- De Groot, J. I. M., & Steg, L. (2007). Value orientations and environmental beliefs in five countries: Validity of an instrument to measure egoistic, altruistic and biospheric value orientations. *Journal of Cross-Cultural Psychology*, 38(3), 318–332. <https://doi.org/10.1177/0022022107300278>
- Defra. (2007). Sustainable Consumption and Production in the UK: Encouraging More Sustainable and Safer Alternatives. *Department for Environment, Food and Rural Affairs and the Forestry Commission.*, (May). Retrieved from <http://archive.defra.gov.uk/corporate/about/reports/documents/2006deptreport.pdf>
- Dickson, M. A. (2000). Personal values, beliefs, knowledge, and attitudes relating to intentions to purchase apparel from socially responsible businesses. *Clothing and Textiles Research Journal*, 18(1), 19–30.
<https://doi.org/10.1177/0887302X0001800103>
- Dijksterhuis, A., Smith, P. K., Van Baaren, R. B., & Wigboldus, D. H. J. (2005). The unconscious consumer: Effects of environment on consumer behavior. *Journal of Consumer Psychology*, 15(3), 193–202.
https://doi.org/10.1207/s15327663jcp1503_3
- Dixon, D. F. (1992). Consumer Sovereignty, Democracy, and the Marketing Concept: A Macromarketing Perspective. *Canadian Journal of Administrative Sciences / Revue Canadienne Des Sciences de l'Administration*, 9(2), 116–125. <https://doi.org/10.1111/j.1936-4490.1992.tb00585.x>
- Durif, F., Boivin, C., & Julien, C. (2010). In search of a green product definition.

Innovative Marketing.

- Eckberg, D. L., & Blocker, T. J. (1996). Christianity, Environmentalism, and the Theoretical Problem of Fundamentalism. *Journal for the Scientific Study of Religion*. <https://doi.org/10.2307/1386410>
- Erkorkmaz, Ü., Etikan, I., Demir, O., Özdamar, K., & Sanisoğlu, S. Y. (2013). Confirmatory factor analysis and fit indices: Review. *Journal of Medical Sciences*, 33(1), 210–223. <https://doi.org/10.5336/medsci.2011-26747>
- Eşsiz, O. (2020). Intergenerational influence on sustainable consumption attitudes and behaviors (Master's thesis, Middle East Technical University).
- Eze, U. C., & Ndubisi, N. O. (2013). Green Buyer Behavior: Evidence from Asia Consumers. *Journal of Asian and African Studies*, 48(4), 413–426. <https://doi.org/10.1177/0021909613493602>
- Fitzsimons, G. M., Chartrand, T. L., & Fitzsimons, G. J. (2008). Automatic effects of brand exposure on motivated behavior: How Apple makes you “think different.” *Journal of Consumer Research*, 35(1), 21–35. <https://doi.org/10.1086/527269>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Gatersleben, B. (2011). The Car as a Material Possession: Exploring the Link between Materialism and Car Ownership and Use. In *Auto Motives: Understanding car use behaviors* (pp. 137–148). <https://doi.org/10.1108/9780857242341-007>
- Geiger, S. M., & Keller, J. (2017). Shopping for Clothes and Sensitivity to the Suffering of Others: The Role of Compassion and Values in Sustainable Fashion Consumption. *Environment and Behavior*, 50(10), 1119–1144. <https://doi.org/10.1177/0013916517732109>
- George M. Zinkhan. (1994). From the Editor: Advertising, Materialism, and Quality of Life. *Journal of Advertising*, 23(2), 1–4.
- Goldsmith, R. E., Flynn, L. R., & Clark, R. A. (2012). Materialistic, brand engaged and status consuming consumers and clothing behaviors. *Journal of Fashion*

- Marketing and Management*, 16(1), 102–119.
<https://doi.org/10.1108/13612021211203050>
- Gollnhofer, J. F., & Schouten, J. W. (2017). Complementing the Dominant Social Paradigm with Sustainability. *Journal of Macromarketing*, 37(2), 143–152.
<https://doi.org/10.1177/0276146717696892>
- Good, J. (2007). Shop 'til We Drop? Television, Materialism and Attitudes About the Natural Environment. *Mass Communication and Society*, 10(3), 365–383.
<https://doi.org/10.1080/15205430701407165>
- Gordon, R., Carrigan, M., & Hastings, G. (2011). A framework for sustainable marketing. *Marketing Theory*, 11(2), 143–163.
<https://doi.org/10.1177/1470593111403218>
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. (2006). Multivariate Data Analysis. In *Upple Saddle River: NJ, Rentice Hall*.
<https://doi.org/10.1016/j.ijpharm.2011.02.019>
- Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E., and Tatham, R. L. (2010). *Multivariate data analysis*, 7th Ed., Prentice-Hall, Upper Saddle River, NJ
- Harbaugh, W. (1998). The Prestige Motive for Making Charitable Transfers. *American Economic Association*, 88(2), 277–282.
- Harley, T. A. (2001). *The Psychology of Language from Data to Theory* (Second Edi). Retrieved from
<http://reader.ebilib.com/Reader.aspx?p=201291&o=103&u=Iyk8fXQhLCM%7B&t=1274560495&h=6694821EAA96D2490E18BFFE2F5A21A2FE17B087&s=8562226&ut=233&pg=1&r=img&pat=n#>
- Haski-Leventhal, D. (2009). Altruism and volunteerism: The perceptions of altruism in four disciplines and their impact on the study of volunteerism. *Journal for the Theory of Social Behaviour*, 39(3), 271–299.
<https://doi.org/10.1111/j.1468-5914.2009.00405.x>
- Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3),

- 336–354. <https://doi.org/10.1016/j.jcps.2013.11.002>
- Hertwich, E., & Katzmayer, M. (2004). Examples of Sustainable Consumption: Review, Classification and Analysis. In *NTNU, Program for industriell økologi*.
- Hoffman, M. L. (1979). Development of Empathy and Altruism.
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60. <https://doi.org/10.21427/D79B73>
- Hopper, J. R., & Nielsen, J. M. (1991). Recycling as altruistic behavior: Normative and Behavioral Strategies to Expand Participation in a Community Recycling Program. *Environment and Behavior*, 23(2), 195–220. <https://doi.org/10.1177/0013916591232004>
- Huang, M. H., & Rust, R. T. (2011). Sustainability and consumption. *Journal of the Academy of Marketing Science*, 39(1), 40–54. <https://doi.org/10.1007/s11747-010-0193-6>
- Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour*, 6(2–3), 94–110. <https://doi.org/10.1002/cb.210>
- Husted, B. W., Russo, M. V., Meza, C. E. B., & Tilleman, S. G. (2014). An exploratory study of environmental attitudes and the willingness to pay for environmental certification in Mexico. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2013.07.008>
- Irmak, C., Block, L. G., & Fitzsimons, G. J. (2005). The placebo effect in marketing: Sometimes you just have to want it to work. *Journal of Marketing Research*, 42(4), 406–409. <https://doi.org/10.1509/jmkr.2005.42.4.406>
- IUCN (International Union for Conservation of Nature and Natural Resources). (1980). *World conservation strategy: living resource conservation for sustainable development*. Morges, Switzerland.
- Jacoby, L. L., & Witherspoon, D. (1982). Remembering without awareness. *Canadian Journal of Psychology/Revue Canadienne de Psychologie*, 36(2),

- 300–324. <https://doi.org/10.1037/h0080638>
- Janiszewski, C., & Wyer, R. S. (2014). Content and process priming: A review. *Journal of Consumer Psychology*, 24(1), 96–118.
<https://doi.org/10.1016/j.jcps.2013.05.006>
- Johnson, M. (1987). Human Learning And Memory. *Annual Review of Psychology*, 38(1), 631–668. <https://doi.org/10.1146/annurev.psych.38.1.631>
- Joshi, Y., & Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions. In *International Strategic Management Review* (Vol. 3). <https://doi.org/10.1016/j.ism.2015.04.001>
- Kahle, L. R. (1996). Social values and consumer behavior: Research from the list of values. In *The psychology of values: The Ontario symposium* (Vol. 8, pp. 135-151). Mahwah, NJ: Lawrence Erlbaum Associates.
- Keller, K. . K. (2008). Strategic Brand Management: building, measuring, and managing brand. In *Pearson/Prentice Hall*.
- Kilbourne, W., McDonagh, P., & Prothero, A. (1997). Sustainable consumption and the quality of life: A macromarketing challenge to the dominant social paradigm. *Journal of Macromarketing*, 17(1), 4–24.
<https://doi.org/10.1177/027614679701700103>
- Kilbourne, W., & Pickett, G. (2008). How materialism affects environmental beliefs, concern, and environmentally responsible behavior. *Journal of Business Research*, 61(9), 885–893.
<https://doi.org/10.1016/j.jbusres.2007.09.016>
- Kim, Yeonshin, & Choi, S. M. (2005). Antecedents of Green Purchase Behaviour: An Examination of Collectivism, Environmental Concern, and PCE. *Advances in Consumer Research*, 32(1), 592–599.
<https://doi.org/10.1177/004057368303900411>
- Kim, Yongju, Porter, A. M., & Goolkasian, P. (2014). Conceptual priming with pictures and environmental sounds. *Acta Psychologica*.
<https://doi.org/10.1016/j.actpsy.2013.12.006>
- Klöckner, C. A. (2013). A comprehensive model of the psychology of environmental behaviour-A meta-analysis. *Global Environmental Change*,

- 23(5), 1028–1038. <https://doi.org/10.1016/j.gloenvcha.2013.05.014>
- Koppes, C. R. (1995). Losing Ground: American Environmentalism at the Close of the Twentieth Century. By Mark Dowie. *Environmental History Review*. <https://doi.org/10.2307/3984698>
- Kotler, P., & Armstrong, G. (2018). Principles of Marketing, Seventeenth Edition. In Pearson. Pearson.
- Krpan, D. (2017). Behavioral Priming 2.0: Enter a dynamical systems perspective. *Frontiers in Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.01204>
- Kurisu, K. H., & Bortoleto, A. P. (2011). Comparison of waste prevention behaviors among three Japanese megacity regions in the context of local measures and socio-demographics. *Waste Management*, 31(7), 1441–1449. <https://doi.org/10.1016/j.wasman.2011.03.008>
- Laran, J., Dalton, A. N., & Andrade, E. B. (2011). The curious case of behavioral backlash: Why brands produce priming effects and slogans produce reverse priming effects. *Journal of Consumer Research*, 37(6), 999–1014. <https://doi.org/10.1086/656577>
- Lastovicka, J. L., Bettencourt, L. A., Hughner, R. S., & Kuntze, R. J. (1999). Lifestyle of the tight and frugal: Theory and measurement. *Journal of Consumer Research*, 26(1), 85–98. <https://doi.org/10.1086/209552>
- Lee, A. Y. (2002). Effects of implicit memory on memory-based versus stimulus-based brand choice. *Journal of Marketing Research*, 39(4), 440–454. <https://doi.org/10.1509/jmkr.39.4.440.19119>
- Lee, J. A., & Holden, S. J. S. (1999). Understanding the determinants of environmentally conscious behavior. *Psychology and Marketing*, 15(5), 373–392. [https://doi.org/10.1002/\(SICI\)1520-6793\(199908\)16:5<373::AID-MAR1>3.0.CO;2-S](https://doi.org/10.1002/(SICI)1520-6793(199908)16:5<373::AID-MAR1>3.0.CO;2-S)
- Lee, K. (2010). The green purchase behavior of hong kong young consumers: The role of peer influence, local environmental involvement, and concrete environmental knowledge. *Journal of International Consumer Marketing*, 23(1), 21–44. <https://doi.org/10.1080/08961530.2011.524575>
- Lee, M., & Ahn, C. (2016). Anti-consumption, Materialism, and Consumer Well-

- being. *Journal of Consumer Affairs*, 50(1), 18–47.
<https://doi.org/10.1111/joca.12089>
- Levit, L. Z. (2014). Egoism and Altruism: the “ Antagonists ” or the “ Brothers ”? *Journal of Studies in Social Sciences*, 7(2), 164–188.
- Lin, J., Lobo, A., & Leckie, C. (2017). The role of benefits and transparency in shaping consumers’ green perceived value, self-brand connection and brand loyalty. *Journal of Retailing and Consumer Services*, 35, 133–141.
<https://doi.org/10.1016/j.jretconser.2016.12.011>
- Lockeretz, W. (2007). Organic farming: An international history. In *CABI*.
<https://doi.org/10.1093/erae/jbp005>
- Lusk, J. L., Nilsson, T., & Foster, K. (2007). Public preferences and private choices: Effect of altruism and free riding on demand for environmentally certified pork. *Environmental and Resource Economics*.
<https://doi.org/10.1007/s10640-006-9039-6>
- Maaya, L., Meulders, M., Surmont, N., & Vandebroek, M. (2018). Effect of environmental and altruistic attitudes on willingness-to-pay for organic and fair trade coffee in flanders. *Sustainability (Switzerland)*, 10(12).
<https://doi.org/10.3390/su10124496>
- Maher, J., & Hu, M. (2003). The priming of material values on consumer information processing of print advertisements. *Journal of Current Issues and Research in Advertising*, 25(2), 21–30.
<https://doi.org/10.1080/10641734.2003.10505146>
- Maio, G. R., Pakizeh, A., Cheung, W. Y., & Rees, K. J. (2009). Changing, Priming, and Acting on Values: Effects via Motivational Relations in a Circular Model. *Journal of Personality and Social Psychology*, 97(4), 699–715.
<https://doi.org/10.1037/a0016420>
- Malhotra, N. K. (2007). *Marketing Research: An Applied Orientation*, 5th Edition. Prentice-Hall, Inc, New Jersey, USA.
- Manderson, A. K. (2006). A systems based framework to examine the multi-contextual application of the sustainability concept. *Environment, Development and Sustainability*, 8(1), 85–97. <https://doi.org/10.1007/s10668->

- Mantovani, D., & Galvão, F. H. S. (2016). Brand priming effect on consumers' financial risk taking behavior. *Revista de Administração*, 52(1), 15–25.
<https://doi.org/10.1016/j.rausp.2016.09.002>
- Margolis, H. (1984). Selfishness, altruism, and rationality: A Theory of Social Choice. *University of Chicago Press*.
- Matsukawa, J., Snodgrass, J. G., & Doniger, G. M. (2005). Conceptual versus perceptual priming in incomplete picture identification. *Journal of Psycholinguistic Research*, 34(6), 515–540. <https://doi.org/10.1007/s10936-005-9162-5>
- Mattioda, R. A., Fernandes, P. T., Detoro, S. P., Casela, J. L., & Junior, O. C. (2013). Principle of triple bottom line in the integrated development of sustainable products. *Chemical Engineering Transactions*, 35(February 2014), 199–204. <https://doi.org/10.3303/CET1335033>
- Mazar, N., & Zhong, C. B. (2010). Do green products make us better people? *Psychological Science*, 21(4), 494–498.
<https://doi.org/10.1177/0956797610363538>
- McCarty, J. A., & Shrum, L. J. (2001). The influence of individualism, collectivism, and locus of control on environmental beliefs and behavior. *Journal of Public Policy and Marketing*.
<https://doi.org/10.1509/jppm.20.1.93.17291>
- McNamara, T. (2005). *Semantic Priming: Perspectives from Memory and Word Recognition*. New York: Great Britain by Psychology Press.
- Milliman, R. E. (1982). Using Background Music to Affect the Behavior of Supermarket Shoppers. *Journal of Marketing*, 46(3), 86–91.
<https://doi.org/10.2307/1251706>
- Minton, E. A., Cornwell, T. B., & Kahle, L. R. (2017). A theoretical review of consumer priming: Prospective theory, retrospective theory, and the affective–behavioral–cognitive model. *Journal of Consumer Behaviour*, 16(4), 309–321.
<https://doi.org/10.1002/cb.1624>
- Milbrath, L. W. (1984). A proposed value structure for a sustainable society.

- Environmentalism, 4(2), 113-124. <https://doi.org/10.1007/BF02337286>
- Mishra, M. (2016). Confirmatory Factor Analysis (CFA) as an Analytical Technique to Assess Measurement Error in Survey Research. *Paradigm*, 20(2), 97–112. <https://doi.org/10.1177/0971890716672933>
- Moisander, J. (2007). Motivational complexity of green consumerism. *International Journal of Consumer Studies*, 31(4), 404–409. <https://doi.org/10.1111/j.1470-6431.2007.00586.x>
- Molden, D. (2014). *Understanding Priming Effects in Social Psychology*. The Guilford Press.
- Mont, O., & Plepys, A. (2008). Sustainable consumption progress: should we be proud or alarmed? *Journal of Cleaner Production*, 16(4), 531–537. <https://doi.org/10.1016/j.jclepro.2007.01.009>
- Morwitz, V. (2014). Consumers' Purchase Intentions and their Behavior. *Foundations and Trends in Marketing*, 7(3).
- Morwitz, V. G., Steckel, J. H., & Gupta, A. (2007). When do purchase intentions predict sales? *International Journal of Forecasting*, 23(3), 347–364. <https://doi.org/10.1016/j.ijforecast.2007.05.015>
- Mukerji, C., & Lurie, A. (1981). The Language of Clothes. In *Random House*. <https://doi.org/10.2307/2070795>
- Murthy, P., & Naidu, M. (2012). Sustainable Management of coffee industry by-products and value addition- A review. *Resources, Conservation and Recycling*, 66, 45–58. <https://doi.org/10.1016/j.resconrec.2012.06.005>
- Naderi, I., & Strutton, D. (2015). I Support Sustainability But Only When Doing So Reflects Fabulously on Me: Can Green Narcissists Be Cultivated? *Journal of Macromarketing*, 35(1), 70–83. <https://doi.org/10.1177/0276146713516796>
- Neumann, E., & DeSchepper, B. G. (1992). An inhibition-based fan effect: Evidence for an active suppression mechanism in selective attention. *Canadian Journal of Psychology/Revue Canadienne de Psychologie*, 46(1), 1–40. <https://doi.org/10.1037/h0084309>
- Nimse, P., Vijayan, A., Kumar, A., & Varadarajan, C. (2007). A review of green product databases. *Environmental Progress*. <https://doi.org/10.1002/ep.10210>

- North, A. C., Hargreaves, D. J., & McKendrick, J. M. (1997). In-store music affects product choice. *Nature*, 390. <https://doi.org/10.1038/36484>
- Nunnally, J.C. (1978). Psychometric theory. New York: McGraw-Hill.
- Norwegian Ministry of the Environment (1994). Oslo Roundtable on Sustainable Production and Consumption.
- Ooijen, I., Fransen, M. L., Verlegh, P. W. J., & Smit, E. G. (2017). Signalling product healthiness through symbolic package cues: Effects of package shape and goal congruence on consumer behaviour. *Appetite*, 109, 73–82. <https://doi.org/10.1016/j.appet.2016.11.021>
- Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products. *Environment*, 48(5), 22–36. <https://doi.org/10.3200/ENV.48.5.22-36>
- Özbakır, M., & Velioğlu, Nurtanış, M. (2010). Pazarlamaya Sürdürülebilirlik Çerçevesinden Bakış ve Bir Örnek Olay Analizi. *Tüketici ve Tüketim Araştırmaları Dergisi*, 2(2), 71–98.
- Ozcan, H., & Ozgul, B. (2019). Yeşil Pazarlama ve Tüketicilerin Yeşil Ürün Tercihlerini Etkileyen Faktörler. *Journal of Vocational and Social Sciences of Turkey*, 1–18.
- Ozgen, O. (2019). *Handbook of Research on Consumption, Media, and Popular Culture in the Global Age* (Vol. 454). IGI Global.
- Panjaitan, T. W. S., & Sutapa, I. N. (2010). Analysis of green product knowledge, green behavior and green consumers of Indonesian students (case study for universities in Surabaya). *IEEM2010 - IEEE International Conference on Industrial Engineering and Engineering Management*. <https://doi.org/10.1109/IEEM.2010.5674276>
- Panzone, L., Hilton, D., Sale, L., & Cohen, D. (2016). Socio-demographics, implicit attitudes, explicit attitudes, and sustainable consumption in supermarket shopping. *Journal of Economic Psychology*, 55, 77–95. <https://doi.org/10.1016/j.joep.2016.02.004>
- Papies, E. K. (2012). Goal Priming in Dieters: Recent Insights and Applications.

- Current Obesity Reports*. <https://doi.org/10.1007/s13679-012-0009-8>
- Papies, E. K. (2016). Goal priming as a situated intervention tool. *Current Opinion in Psychology*, 12, 12–16. <https://doi.org/10.1016/j.copsyc.2016.04.008>
- Papies, E. K., & Hamstra, P. (2010). Goal priming and eating behavior: Enhancing self-regulation by environmental cues. *Health Psychology*. <https://doi.org/10.1037/a0019877>
- Papú Carrone, N. (2020). *Traceability and Transparency: A Way Forward for SDG 12 in the Textile* https://doi.org/10.1007/978-981-13-8787-6_1
- Peattie, K. (2001). Towards Sustainability : The Third Age of Green Marketing. *The Marketing Review*, 2(2), 129–146.
- Peattie, K. J. (2010). Green consumption: behavior and norms. *Annual Review of Environment and Resources*, 35(1), 195–228.
- Perlmutter, H., & Trist, E. (1986). Paradigms for social transition. *HUMAN Relations*, Vol. 39, pp. 1–27.
- Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and Peripheral Routes to Advertising Effectiveness: The Moderating Role of Involvement. *Journal of Consumer Research*, 10, 135–146. <https://doi.org/10.1086/208954>
- Pfattheicher, S., Sassenrath, C., & Schindler, S. (2016). Feelings for the Suffering of Others and the Environment: Compassion Fosters Proenvironmental Tendencies. *Environment and Behavior*, 48(7), 929–945. <https://doi.org/10.1177/0013916515574549>
- Piliavin, J. A., & Charng, H.-W. (1990). ALTRUISM: A Review of Recent Theory and Research. *Annual Review of Sociology*, Vol. 16, pp. 27–65. <https://doi.org/10.1146/annurev.so.16.080190.000331>
- Polonsky, M., Kilbourne, W., & Vocino, A. (2014). Relationship between the dominant social paradigm, materialism and environmental behaviours in four Asian economies. *European Journal of Marketing*, 48(3/4), 522–551. <https://doi.org/10.1108/ejm-07-2011-0351>
- Powers, T. L., & Hopkins, R. A. (2006). Altruism and consumer purchase behavior. *Journal of International Consumer Marketing*, 19(1), 107–130. https://doi.org/10.1300/J046v19n01_06

- Prothero, A., Dobscha, S., Freund, J., Kilbourne, W. E., Luchs, M. G., Ozanne, L. K., & Thøgersen, J. (2011). Sustainable consumption: Opportunities for consumer research and public policy. *Journal of Public Policy and Marketing*, 30(1), 31–38. <https://doi.org/10.1509/jppm.30.1.31>
- Pryor, K., & Brodie, R. J. (1998). How advertising slogans can prime evaluations of brand extensions: Further empirical results. *Journal of Product & Brand Management*, 7(6), 497–508. <https://doi.org/10.1108/10610429810244666>
- Ralston, D. A., Holt, D. H., Terpstr, R. H., & Kai-Cheng, Y. (1997). The Impact of National Culture and Economic Ideology on Managerial Work Values. *Journal of International Business Studies*, 28(1), 177–207.
- Reimers, V., Magnuson, B., & Chao, F. (2017). Happiness, altruism and the Prius effect: How do they influence consumer attitudes towards environmentally responsible clothing? *Journal of Fashion Marketing and Management*, 21(1), 115–132. <https://doi.org/10.1108/JFMM-07-2016-0053>
- Richins, M. L., & Dawson, S. (1992). A Consumer Values Orientation for Materialism and Its Measurement: Scale Development and Validation. *Journal of Consumer Research*, 19(3), 303. <https://doi.org/10.1086/209304>
- Rickaby, M. A., Glass, J., & Fernie, S. (2020). Conceptualizing the Relationship between Personal Values and Sustainability—A TMO Case Study. *Administrative Sciences*, 10(1), 15. <https://doi.org/10.3390/admsci10010015>
- Rokeach, M. (1973). The Nature of Human Values. *Social Work*, 19(6), 758–759. <https://doi.org/10.1093/sw/19.6.758>
- Saha, M., & Darnton, G. (2005). Green Companies or Green Con-panies: Are Companies Really Green, or Are They Pretending to Be? *Business and Society Review*, 110(2), 117–157. <https://doi.org/10.1111/j.0045-3609.2005.00007.x>
- Salonen, A. O., & Åhlberg, M. (2013). Towards sustainable society: From materialism to post-materialism. *International Journal of Sustainable Society*, 5(4), 374–393. <https://doi.org/10.1504/IJSSOC.2013.056846>
- Sammer, K., & Wüstenhagen, R. (2006). The influence of eco-labelling on consumer behaviour - Results of a discrete choice analysis for washing machines. *Business Strategy and the Environment*, 15(3), 185–199.

<https://doi.org/10.1002/bse.522>

- Saroglou, V. (2013). Religion, spirituality, and altruism. *Handbook of Psychology, Religion, and Spirituality*, 1, 439–457. <https://doi.org/10.1037/14045-024>
- Schacter, D. L. (1987). Implicit Memory: History and Current Status. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 13(3), 501–518. <https://doi.org/10.1037/0278-7393.13.3.501>
- Schacter, D. L. (1992). Priming and Multiple Memory Systems: Perceptual Mechanisms of Implicit Memory. *Journal of Cognitive Neuroscience*, 4(3), 244–259. <https://doi.org/10.1162/jocn.1992.4.3.244>
- Schacter, D. L., & Buckner, R. L. (1998). Priming and the brain. *Neuron*, 20(2), 185–195. [https://doi.org/10.1016/S0896-6273\(00\)80448-1](https://doi.org/10.1016/S0896-6273(00)80448-1)
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *MPR-Online*, 8(2), 23–74.
- Schreuder, R., Flores d'Arcais, G. B., & Glazenborg, G. (1984). Effects of perceptual and conceptual similarity in semantic priming. *Psychological Research*, 45(4), 339–354. <https://doi.org/10.1007/BF00309710>
- Schultz, P. W., Gouveia, V. V., Cameron, L. D., Tankha, G., Schmuck, P., & Franěk, M. (2005). Values and their relationship to environmental concern and conservation behavior. *Journal of Cross-Cultural Psychology*, 36(4), 457–475. <https://doi.org/10.1177/0022022105275962>
- Schwartz, S. H. (1977). Normative Influences on Altruism. *Advances in Experimental Social Psychology*, 10(1), 221–279. [https://doi.org/10.1016/S0065-2601\(08\)60358-5](https://doi.org/10.1016/S0065-2601(08)60358-5)
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25(C), 1–65. [https://doi.org/10.1016/S0065-2601\(08\)60281-6](https://doi.org/10.1016/S0065-2601(08)60281-6)
- Schwartz, S. H. (2012). An Overview of the Schwartz Theory of Basic Values. *Online Readings in Psychology and Culture*, 2(1), 1–20. <https://doi.org/10.9707/2307-0919.1116>

- Schwartz, S. H., & Fleishman, J. A. (1982). Effects of Negative Personal Norms on Helping Behavior. *Personality and Social Psychology Bulletin*, 8(1), 81–86. <https://doi.org/10.1177/014616728281013>
- Shopaholic. (2020) Cambridge Online Dictionary.
- Sdrolia, E., & Zarotiadis, G. (2019). A Comprehensive Review for Green Product Term: From Definition To Evaluation. *Journal of Economic Surveys*, 33(1), 150–178. <https://doi.org/10.1111/joes.12268>
- Şener, A., & Hazer, O. (2008). Values and sustainable consumption behavior of women: A turkish sample. *Sustainable Development*, 16(5), 291–300. <https://doi.org/10.1002/sd.329>
- Seyfang, G. (2006). Sustainable consumption, the new economics and community currencies: Developing new institutions for environmental governance. *Regional Studies*, 40(7), 781–791. <https://doi.org/10.1080/00343400600959173>
- Sharda, N., & Bhat, A. K. (2018). Austerity to materialism and brand consciousness: luxury consumption in India. *Journal of Fashion Marketing and Management*. <https://doi.org/10.1108/JFMM-03-2017-0025>
- Sharma, K., & Chandni, A. (2017). Green Purchase Intentions, Collectivism and Materialism: An Empirical Investigation. *The Delhi University Journal of the Humanities and the Social Sciences*, 4(October), 33–50. <https://doi.org/10.13140/RG.2.2.26270.18244>
- Shrum, L. J., Burroughs, J. E., & Rindfleisch, A. (2005). Television’s cultivation of material values. *Journal of Consumer Research*, 32, 473–479. <https://doi.org/10.1086/497559>
- Shukor, M. S., Sulaiman, Z., Chin, T. A., Zakuan, N., & Muharam, F. M. (2017). Materialism, Altruism, Environmental Values, Learning Strategies and Sustainable Claim on Purchase Intention of Energy Efficient Vehicle (EEV) - A Literature Review. *IOP Conference Series: Materials Science and Engineering*, 215(1). <https://doi.org/10.1088/1757-899X/215/1/012021>
- Siano, A., Vollero, A., Conte, F., & Amabile, S. (2017). “More than words”:

- Expanding the taxonomy of greenwashing after the Volkswagen scandal. *Journal of Business Research*, 71, 27–37.
<https://doi.org/10.1016/j.jbusres.2016.11.002>
- Simpson, B., & Willer, R. (2015). Beyond Altruism: Sociological Foundations of Cooperation and Prosocial Behavior. *Annual Review of Sociology*, 41, 43–63.
<https://doi.org/10.1146/annurev-soc-073014-112242>
- Sirgy, M. J. (1998). *Materialism and Quality of Life*. 227–260.
- Song, S., & Ko, E. (2017). Perceptions, attitudes, and behaviors toward sustainable fashion: Application of Q and Q-R methodologies. *International Journal of Consumer Studies*, 41(3), 264–273. <https://doi.org/10.1111/ijcs.12335>
- Sprott, D., Czellar, S., & Spangenberg, E. (2009). The importance of a general measure of brand engagement on market behavior: Development and validation of a scale. *Journal of Marketing Research*, 46(1), 92–104.
<https://doi.org/10.1509/jmkr.46.1.92>
- Squire, L. R. (1992). Nondeclarative Memory: Multiple Brain Systems Supporting Learning. *Journal*, 4(3), 232–243. Retrieved from
<http://www.mitpressjournals.org/doi/abs/10.1162/jocn.1992.4.3.232>
- Squire, L. R. (2004). Memory systems of the brain: A brief history and current perspective. *Neurobiology of Learning and Memory*.
<https://doi.org/10.1016/j.nlm.2004.06.005>
- Steele, W., Schreiber, G., Guiltinan, A., Nass, C., Glynn, S., Wright, D., ... Garratty, G. (2008). The role of altruistic behavior, empathetic concern, and social responsibility motivation in blood donation behavior. *Transfusion*, 48(1), 43–54. <https://doi.org/10.1002/9781444311761.ch19>
- Steg, L., Perlaviciute, G., van der Werff, E., & Lurvink, J. (2014). The Significance of Hedonic Values for Environmentally Relevant Attitudes, Preferences, and Actions. *Environment and Behavior*, 46(2), 163–192.
<https://doi.org/10.1177/0013916512454730>
- Stimulus. (2020) Cambridge Online Dictionary.
- Strizhakova, Y., & Coulter, R. A. (2013). The “green” side of materialism in emerging BRIC and developed markets: The moderating role of global

- cultural identity. *International Journal of Research in Marketing*, 30(1), 69–82. <https://doi.org/10.1016/j.ijresmar.2012.08.003>
- Takarada, Y., & Nozaki, D. (2018). Motivational goal-priming with or without awareness produces faster and stronger force exertion. *Scientific Reports*, 8(1), 1–12. <https://doi.org/10.1038/s41598-018-28410-0>
- Tang, Z., Chen, X., & Luo, J. (2011). Determining socio-psychological drivers for rural household recycling behavior in developing countries: A case study from wugan, hunan, china. *Environment and Behavior*, 43(6), 848–877. <https://doi.org/10.1177/0013916510375681>
- Tanner, C., & Kast, S. W. (2003). Promoting Sustainable Consumption: Determinants of Green Purchases by Swiss Consumers. *Psychology and Marketing*, 20(10), 883–902. <https://doi.org/10.1002/mar.10101>
- Tilikidou, I., & Delistavrou, A. (2001). *Utilization of Selected Demographics and Psychographics in Understanding Recycling Behavior : A Focus on Materialism* by. (34), 75–93.
- Tilikidou, I., & Zotos, Y. (1996). Ecological consumer behaviour: Review and suggestions for future research. *Medit.*
- Trudel, R. (2018). Sustainable consumer behavior. *Consumer Psychology Review*, II(October 2018), 85–96. <https://doi.org/10.1002/arcp.1045>
- Truong, Y., & McColl, R. (2011). Intrinsic motivations, self-esteem, and luxury goods consumption. *Journal of Retailing and Consumer Services*, 18(6), 555–561. <https://doi.org/10.1016/j.jretconser.2011.08.004>
- Tseng, S. C., & Hung, S. W. (2013). A framework identifying the gaps between customers' expectations and their perceptions in green products. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2013.06.050>
- Tulving, E. (1983). *Elements of Episodic Memory*. Oxford University Press.
- Tulving, E., & Schacter, D. L. (1990). Priming and human memory systems. *Science*, 247(4940), 301–306. <https://doi.org/10.1126/science.2296719>
- Tuulik, K., Õunapuu, T., Kuimet, K., & Titov, E. (2016). Rokeach's instrumental and terminal values as descriptors of modern organisation values. *International Journal of Organizational Leadership*, 5(2), 151–161.

- <https://doi.org/10.33844/ijol.2016.60252>
- Toyota Environmental Challenge 2050 (2018), Going Beyond Zero Environmental Impact and Achieving a Net Positive Impact by 2050
- The American Marketing Association. (2020) What is Marketing? Retrieved from <https://www.ama.org>
- Umberger, W. J., McFadden, D. D. T., & Smiths, A. R. (2009). Does altruism play a role in determining U.S. consumer preferences and willingness to pay for natural and regionally produced beef? *Agribusiness*.
<https://doi.org/10.1002/agr.20194>
- United Nations (1987). Report of the World Commission on environment and development: "our common future." Retrieved from https://www.are.admin.ch/are/en/home/sustainable-development/international-cooperation/2030agenda/un-_milestones-in-sustainable-development/1987--brundtland-report.html/
- United Nations (1994) Sustainable consumption. Ministry of Environment, 1994,Oslo, Norway, 19–20 January 1994.
- United Nations. (2019) Department of Economic and Social Affairs, Population Division. World Population Prospects 2019: Highlights. ST/ESA/SER.A/423
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science*, 314(5802), 1154–1156.
<https://doi.org/10.1126/science.1132491>
- Walsh, G., Shiu, E., Hassan, L. M., Michaelidou, N., & Beatty, S. E. (2010). Emotions, store-environmental cues, store-choice criteria, and marketing outcomes. *Journal of Business Research*, 64(7), 737–744.
<https://doi.org/10.1016/j.jbusres.2010.07.008>
- Wang, L., Gu, D., Jiang, J., & Sun, Y. (2019). The Not-So-Dark Side of Materialism: Can Public Versus Private Contexts Make Materialists Less Eco-Unfriendly? *Frontiers in Psychology*, 10.
<https://doi.org/10.3389/fpsyg.2019.00790>
- Ward, S., & Wackman, D. (1971). Family and Media Influences on Adolescent Consumer Learning. *American Behavioral Scientist*, 14(3), 415–427.

- Webb, D. J., Mohr, L. A., & Harris, K. E. (2008). A re-examination of socially responsible consumption and its measurement. *Journal of Business Research*, 61(2), 91–98. <https://doi.org/10.1016/j.jbusres.2007.05.007>
- Webster. (1975). Determining the Characteristics of the Socially Conscious Consumer. *Journal of Consumer Research*, 2(3), 188. <https://doi.org/10.1086/208631>
- Williams, K., & Dair, C. (2007). *A framework of sustainable behaviours that can be enabled through the design of neighbourhood-scale developments*. 15(3), 160–173.
- Wong, S. K. S. (2012). The influence of green product competitiveness on the success of green product innovation: Empirical evidence from the Chinese electrical and electronics industry. *European Journal of Innovation Management*. <https://doi.org/10.1108/14601061211272385>
- Ye, S., & Ng, T. K. (2019). Value change in response to cultural priming: The role of cultural identity and the impact on subjective well-being. *International Journal of Intercultural Relations*, 70, 89–103. <https://doi.org/10.1016/j.ijintrel.2019.03.003>
- Yoon, K. (1995). Comparison of Beliefs about Advertising, Attitude toward Advertising, and Materialism Held by African Americans and Caucasians. *Psychological Reports*, 77(2). <https://doi.org/10.2466/pr0.1995.77.2.455>
- Young, K. (2018). The rise of Green Consumerism: What brands need to know. *Journal of Brand Strategy*. Retrieved from <https://blog.globalwebindex.com/chart-of-the-week/green-consumerism/>
- Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: Green consumer behaviour when purchasing products. *Sustainable Development*, 18(1), 20–31. <https://doi.org/10.1002/sd.394>
- Zaleskiewicz, T., Gasiorowska, A., Kesebir, P., Luszczynska, A., & Pyszczynski, T. (2009). Money and the fear of death: The symbolic power of money as an existential anxiety buffer. *Journal of Economic Psychology*, 20(6). <https://doi.org/10.1016/j.joep.2013.02.008>
- Zhang, Y., & Shrum, L. J. (2009). The influence of self-construal on impulsive

consumption. *Journal of Consumer Research*, 35, 838–580.

<https://doi.org/10.1086/593687>

Zinkhan, G. M. (1994). From the editor: Advertising, materialism, and quality of life. *Journal of Advertising*, 1-4.



APPENDICES

A. Scientific Research and Publication Ethics Committee (BAYEK) Approval


ODTÜ
METU
NORTHERN CYPRUS
CAMPUS
01/05/2020

Scientific Research and Publication Ethics Committee (BAYEK)

Dear Sidar Yurteri,

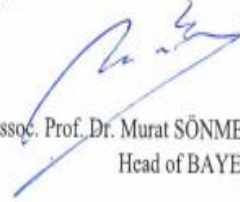
The METU Northern Cyprus Campus Scientific Research and Publication Ethics Board has completed the evaluation of your application for ethics clearance of your research.

Title of the study:
Effects of Brand Priming on Sustainable Consumption Attitudes and Behaviors

Your application has been approved and has been found to be in compliance with the code of ethics within 17/04/2020 - 30/07/2020 dates.

On behalf of the Scientific Research and Publication Ethics Committee, I wish you success in your research. Please feel free to contact to Committee should you have any queries reading this approval.

Yours truly,


Assoc. Prof. Dr. Murat SÖNMEZ
Head of BAYEK

B. Pretest on perception and familiarity towards brand names used in the word scrambling task

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to measure familiarity and perception towards certain brands. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 4-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution.

Please indicate your level of familiarity with each of the following brands.

	Not at all familiar						Extremely Familiar
Chanel	1	2	3	4	5	6	7
Chloe	1	2	3	4	5	6	7
Porsche	1	2	3	4	5	6	7
Tommy Hilfiger	1	2	3	4	5	6	7
Maserati	1	2	3	4	5	6	7
Lacoste	1	2	3	4	5	6	7
Dior	1	2	3	4	5	6	7
Mitsubishi	1	2	3	4	5	6	7
Versace	1	2	3	4	5	6	7
Guess	1	2	3	4	5	6	7
Nissan	1	2	3	4	5	6	7
Alfa Romeo	1	2	3	4	5	6	7
Zara	1	2	3	4	5	6	7
LC Waikiki	1	2	3	4	5	6	7
Mango	1	2	3	4	5	6	7
Colin's	1	2	3	4	5	6	7
Ford	1	2	3	4	5	6	7
İpekyol	1	2	3	4	5	6	7
Mavi	1	2	3	4	5	6	7
Nike	1	2	3	4	5	6	7
New Balance	1	2	3	4	5	6	7
H & M	1	2	3	4	5	6	7
Koton	1	2	3	4	5	6	7
Bershka	1	2	3	4	5	6	7
Levis	1	2	3	4	5	6	7
Hyundai	1	2	3	4	5	6	7
Adidas	1	2	3	4	5	6	7
U.S. Polo	1	2	3	4	5	6	7

	Not at all familiar						Extremely Familiar
Honda	1	2	3	4	5	6	7
Lamborghini	1	2	3	4	5	6	7
Fiat	1	2	3	4	5	6	7
Mercedes	1	2	3	4	5	6	7
Audi	1	2	3	4	5	6	7
Mini Cooper	1	2	3	4	5	6	7
Bulgari	1	2	3	4	5	6	7
Jaguar	1	2	3	4	5	6	7
Gucci	1	2	3	4	5	6	7
Bentley	1	2	3	4	5	6	7
Volvo	1	2	3	4	5	6	7
Rolex	1	2	3	4	5	6	7
Burberry	1	2	3	4	5	6	7
Toyota	1	2	3	4	5	6	7
Renault	1	2	3	4	5	6	7
Armani	1	2	3	4	5	6	7
BMW	1	2	3	4	5	6	7
Peugeot	1	2	3	4	5	6	7
Volkswagen	1	2	3	4	5	6	7
Ferrari	1	2	3	4	5	6	7
Citroen	1	2	3	4	5	6	7
Mudo	1	2	3	4	5	6	7
Kia	1	2	3	4	5	6	7
Defacto	1	2	3	4	5	6	7
Suzuki	1	2	3	4	5	6	7

Please indicate how much you think each brand is a “luxury brand”.

	Not at all a luxury brand						Totally a luxury brand
Chanel	1	2	3	4	5	6	7
Chloe	1	2	3	4	5	6	7
Porsche	1	2	3	4	5	6	7
Tommy Hilfiger	1	2	3	4	5	6	7
Maserati	1	2	3	4	5	6	7
Lacoste	1	2	3	4	5	6	7
Dior	1	2	3	4	5	6	7
Mitsubishi	1	2	3	4	5	6	7
Versace	1	2	3	4	5	6	7
Guess	1	2	3	4	5	6	7
Nissan	1	2	3	4	5	6	7
Alfa Romeo	1	2	3	4	5	6	7
Zara	1	2	3	4	5	6	7
LC Waikiki	1	2	3	4	5	6	7
Mango	1	2	3	4	5	6	7
Colin's	1	2	3	4	5	6	7
Ford	1	2	3	4	5	6	7
İpekyol	1	2	3	4	5	6	7
Mavi	1	2	3	4	5	6	7
Nike	1	2	3	4	5	6	7
New Balance	1	2	3	4	5	6	7
H & M	1	2	3	4	5	6	7
Koton	1	2	3	4	5	6	7
Bershka	1	2	3	4	5	6	7
Levis	1	2	3	4	5	6	7
Hyundai	1	2	3	4	5	6	7
Adidas	1	2	3	4	5	6	7
U.S. Polo	1	2	3	4	5	6	7
Honda	1	2	3	4	5	6	7
Lamborghini	1	2	3	4	5	6	7
Mercedes	1	2	3	4	5	6	7
Fiat	1	2	3	4	5	6	7
Audi	1	2	3	4	5	6	7

	Not at all a luxury brand						Totally a luxury brand
Mini Cooper	1	2	3	4	5	6	7
Bulgari	1	2	3	4	5	6	7
Jaguar	1	2	3	4	5	6	7
Gucci	1	2	3	4	5	6	7
Bentley	1	2	3	4	5	6	7
Volvo	1	2	3	4	5	6	7
Rolex	1	2	3	4	5	6	7
Burberry	1	2	3	4	5	6	7
Toyota	1	2	3	4	5	6	7
Renault	1	2	3	4	5	6	7
Armani	1	2	3	4	5	6	7
BMW	1	2	3	4	5	6	7
Peugeot	1	2	3	4	5	6	7
Volkswagen	1	2	3	4	5	6	7
Ferrari	1	2	3	4	5	6	7
Citroen	1	2	3	4	5	6	7
Mudo	1	2	3	4	5	6	7
Kia	1	2	3	4	5	6	7
Defacto	1	2	3	4	5	6	7
Suzuki	1	2	3	4	5	6	7

Please answer the following **questions**.

What is your age?

What is your gender?

Female _____

Male _____

Thank you for your contribution to the study!

C. Pretest results for familiarity and perception toward brand names

Table A.1. Pretest Results of Luxury Perception Towards All Car Brands

Brand Name	<i>N</i>	$\bar{X}$	<i>SD</i>	<i>p</i>
Porsche	45	6,933	0,252	0,000
Ferrari	45	6,822	0,614	0,000
Lamborghini	45	6,622	0,96	0,000
Mercedes	45	6,556	0,893	0,000
Maserati	44	6,477	1,045	0,000
Jaguar	44	6,409	1,245	0,000
BMW	45	6,267	0,688	0,000
Audi	45	6,044	0,797	0,000
Bentley	43	5,954	1,558	0,004
Mini Cooper	45	5,844	0,903	0,001
Volvo	45	5,667	1,365	0,02
Alfa Romeo	45	5,311	1,459	0,195
$\bar{X}$	25	4,838	1,436	1
Volkswagen	45	4,311	1,49	0,156
Toyota	45	3,8	1,791	0,015
Peugeot	45	3,8	1,546	0,007
Ford	45	3,711	1,632	0,005
Nissan	44	3,682	1,852	0,009
Mitsubishi	45	3,556	1,984	0,006
Citroen	45	3,556	1,673	0,002
Fiat	45	3,489	1,766	0,002
Honda	45	3,333	1,784	0,001
Renault	45	3,311	1,857	0,001
Hyundai	45	3,289	1,753	0,000
Kia	44	3,136	1,519	0,000
Suzuki	45	3,067	1,684	0,000

Note. $\bar{X}$ = Mean, *SD*=Standard Deviation, *p*= p value

Table A.2. Pretest Results of Luxury Perception Towards All Clothing Brands

Brand Name	<i>N</i>	$\bar{X}$	<i>SD</i>	<i>p</i>
Gucci	45	6,267	1,156	0,000
Chanel	44	6,091	1,709	0,000
Burberry	43	5,954	1,154	0,000
Armani	45	5,867	0,894	0,000
Dior	44	5,841	1,446	0,000
Bulgari	44	5,705	1,579	0,000
Versace	44	5,5	1,772	0,004
Tommy Hilfiger	45	5,444	1,423	0,001
Lacoste	45	5,378	1,527	0,004
Guess	44	5,364	1,496	0,004
Chloe	44	4,864	1,887	0,189
$\bar{X}$	27	4,318	1,293	1
U.S. Polo	45	4,178	1,723	0,716
Mango	45	4,156	4,348	0,851
Nike	45	4,133	1,829	0,648
New Balance	45	4,067	1,657	0,503
Adidas	45	4	1,758	0,418
Zara	45	3,956	1,718	0,348
İpekyol	45	3,844	1,623	0,202
Levi's	45	3,778	1,536	0,131
Mavi	45	3,489	1,561	0,023
Mudo	44	3,205	1,456	0,002
Bershka	44	3,182	1,688	0,004
H&M	45	2,911	1,881	0,000
Colin's	45	2,867	1,342	0,000
Koton	44	2,5	1,422	0,000
DeFacto	45	2,067	1,304	0,000
LcWaikiki	45	1,978	1,215	0,000

Note. $\bar{X}$ = Mean, *SD*=Standard Deviation, *p*= p value

Table A.3. Pretest Results of Familiarity Towards Luxury Clothing Brands

Brand Name	<i>N</i>	$\bar{X}$	<i>SD</i>	<i>p</i>
Lacoste	45	6,267	1,355	0,003
Tommy Hilfiger	45	6,156	1,314	0,005
Chanel	45	5,356	2,091	0,515
Armani	45	5,356	2,002	0,497
Dior	45	5,133	2,38	0,783
Burberry	45	5	2,226	0,92
$\bar{X}$	11	4,93	0,903	1
Gucci	45	4,889	2,177	0,951
Guess	45	4,733	2,444	0,795
Versace	45	4,333	2,523	0,446
Bulgari	44	3,591	2,424	0,079
Chloe	45	3,422	2,321	0,04

Note. $\bar{X}$ = Mean, *SD*=Standard Deviation, *p*= p value

Table A.4. Pretest Results of Familiarity Towards Luxury Car Brands

Brand Name	<i>N</i>	$\bar{X}$	<i>SD</i>	<i>p</i>
Mercedes	45	6,533	0,991	0,026
Porsche	45	6,422	0,988	0,059
Mini Cooper	45	6,311	1,203	0,198
BMW	45	6,267	1,355	0,295
Audi	45	6,2	1,392	0,389
Lamborghini	45	6,178	1,435	0,432
Ferrari	45	6,111	1,496	0,543
$\bar{X}$	12	5,839	0,654	1
Volvo	45	5,8	1,854	0,943
Alfa Romeo	45	5,444	2,051	0,516
Jaguar	45	5,244	2,258	0,374
Maserati	45	5,222	1,987	0,297
Bentley	45	4,333	2,523	0,047

Note. $\bar{X}$ = Mean, *SD*=Standard Deviation, *p*= p value

Table A.5. Pretest Results of Familiarity Towards Regular Car Brands

Brand Name	<i>N</i>	$\bar{X}$	<i>SD</i>	<i>p</i>
Nissan	45	6,356	1,048	0,145
Toyota	45	6,356	1,209	0,202
Ford	45	6,289	1,255	0,294
Fiat	45	6,244	1,317	0,376
Renault	45	6,067	1,684	0,743
Volkswagen	45	6	1,719	0,854
Hyundai	45	5,978	1,588	0,881
Honda	45	5,956	1,718	0,926
$\bar{X}$	13	5,91	0,496	1
Peugeot	45	5,867	1,854	0,934
Citroen	45	5,822	1,762	0,86
Suzuki	45	5,756	1,885	0,772
Mitsubishi	45	5,711	1,829	0,701
Kia	44	4,432	2,386	0,031

Note. $\bar{X}$ = Mean, *SD*=Standard Deviation, *p*= p value

Table A.6. Pretest Results of Familiarity Towards Regular Clothing Brands

Brand Name	<i>N</i>	$\bar{X}$	<i>SD</i>	<i>p</i>
LcWaikiki	45	6,778	0,67	0,001
Nike	45	6,667	0,826	0,023
Zara	45	6,578	1,011	0,112
Adidas	45	6,578	1,076	0,133
H&M	45	6,533	1,1	0,186
Mavi	45	6,467	1,12	0,28
DeFacto	45	6,444	0,99	0,261
Colin's	45	6,267	1,195	0,703
U.S. Polo	45	6,267	1,286	0,722
New Balance	44	6,227	1,412	0,827
$\bar{X}$	16	6,148	0,549	1
Mango	45	6,089	1,649	0,89
Levi's	44	6,046	1,509	0,793
Koton	45	5,911	1,69	0,586
İpekyol	45	5,489	1,973	0,195
Bershka	45	5,133	2,446	0,107
Mudo	45	4,889	2,347	0,039

Note. $\bar{X}$ = Mean, *SD*=Standard Deviation, *p*= p value

D. Word scrambling task pretest

Survey 1: Luxury car word scrambling task

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how word scrambling task relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 2-3 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution to the survey.

Please unscramble car brand names below by using given letters.

E R P O S C H : _____

F E A R I R R : _____

L A B M O R H I G N I : _____

S E D M E R E C : _____

M W B : _____

I D A U : _____

	Strongly			Strongly	
	Disagree	Disagree	Neither	Agree	Agree
My life would be better if I owned certain things I do not have.	1	2	3	4	5
I think convenience is important while shopping.	1	2	3	4	5
Some of the most important achievements in life include acquiring material possessions.	1	2	3	4	5
I would be happier if I could afford to buy more things.	1	2	3	4	5
It sometimes bothers me very much that I can't afford to buy all the things I'd like.	1	2	3	4	5
I try to choose products that will reflect my values and status.	1	2	3	4	5

What do you think the purpose of this study is?

Thank you for your contribution to the study!

Survey 2: Regular clothing word scrambling task

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how word scrambling task relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 2-3 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution to the survey.

Please unscramble clothing brand names below by using given letters.

I M V A : _____

& M H : _____

T O N O K : _____

F A D E C T O : _____

L W C A I I K I I : _____

L O I C N S : _____

	Strongly			Strongly	
	Disagree	Disagree	Neither	Agree	Agree
My life would be better if I owned certain things I do not have.	1	2	3	4	5
I think convenience is important while shopping.	1	2	3	4	5
Some of the most important achievements in life include acquiring material possessions.	1	2	3	4	5
I would be happier if I could afford to buy more things.	1	2	3	4	5
It sometimes bothers me very much that I can't afford to buy all the things I'd like.	1	2	3	4	5
I try to choose products that will reflect my values and status	1	2	3	4	5

What do you think the purpose of this study is?

Thank you for your contribution to the study!

Survey 3: Regular car word scrambling task

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how word scrambling task relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 2-3 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution to the survey.

Please unscramble car brand names below by using given letters.

N A S S I N: _____

T A I F: _____

S I Z U U K : _____

H U Y D A I N: _____

H A N D O: _____

R A N E U T L : _____

	Strongly			Strongly	
	Disagree	Disagree	Neither	Agree	Agree
My life would be better if I owned certain things I do not have.	1	2	3	4	5
I think convenience is important while shopping.	1	2	3	4	5
Some of the most important achievements in life include acquiring material possessions.	1	2	3	4	5
I would be happier if I could afford to buy more things.	1	2	3	4	5
It sometimes bothers me very much that I can't afford to buy all the things I'd like.	1	2	3	4	5
I try to choose products that will reflect my values and status	1	2	3	4	5

What do you think the purpose of this study is?

Thank you for your contribution to the study!

Survey 4: Luxury clothing word scrambling task

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how word scrambling task relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 2-3 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution to the survey.

Please unscramble clothing brand names below by using given letters.

GUICC : _____

CNEHAL : _____

DOIR : _____

MANARI : _____

BERRBURY : _____

TMMOY HIFLREGI : _____

	Strongly			Strongly	
	Disagree	Disagree	Neither	Agree	Agree
My life would be better if I owned certain things I do not have.	1	2	3	4	5
I think convenience is important while shopping.	1	2	3	4	5
Some of the most important achievements in life include acquiring material possessions.	1	2	3	4	5
I would be happier if I could afford to buy more things.	1	2	3	4	5
It sometimes bothers me very much that I can't afford to buy all the things I'd like.	1	2	3	4	5
I try to choose products that will reflect my values and status.	1	2	3	4	5

What do you think the purpose of this study is?

Thank you for your contribution to the study!

E. Reading comprehension task pretest

Survey 1: Regular Starbucks - Reading Comprehension Pretest

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how reading comprehension relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 2-3 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution to the survey.

Please read the text carefully and answer the questions that follow.



With almost 50 years of experience, Starbucks strives to provide the best quality of coffee to its customers. Starbucks manages every stage of the production process, starting from growing coffee beans to selling finished coffee products. Starbucks sources its coffee beans only from selected producers that maintain high quality standards so that each cup of coffee provides the same high quality to every customer. Starbucks only harvests coffee beans when they are red, mature and perfectly shaped. After coffee bean selection, Starbucks experts taste more than 1000 cups of coffee to guarantee superior quality. Finally, Starbucks uses patented roasting technology and special vacuum sealed packaging to lock in flavor and freshness until it reaches customers. By following these steps, Starbucks provides the highest quality coffee for its customers around the world.

How well did you understand the text above?

Did not						Understood
understand at all						very well
	1	2	3	4	5	6 7

According to the text, how would you rate the quality of Starbucks?

	Very Low					Very High
Starbucks	1	2	3	4	5	6 7

According to the text, how would you rate the sustainability of Starbucks?

	Very Low					Very High
Starbucks	1	2	3	4	5	6 7

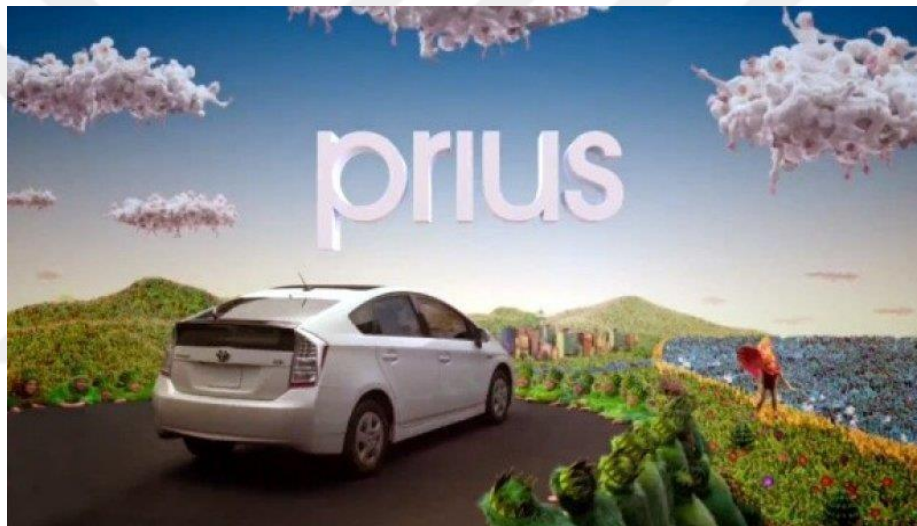
			Strongly			Strongly
			Disagree	Disagree	Neither	Agree
						Agree
I help others even when there is no direct benefit to me.	1	2	3	4	5	
	1	2	3	4	5	
I can give away my things to someone who needs it more than I do.						
I am very concerned for the well-being of other people, even if I don't know them personally.	1	2	3	4	5	
When I see individuals in need, I try to find a way to help them.	1	2	3	4	5	

What do you think the purpose of this study is?

Survey 2: Sustainability Toyota- Reading Comprehension Pretest

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how reading comprehension relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 2-3 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution to the survey.

Please read the text carefully and answer the questions that follow.



As one of the leading manufacturers of modern, mass-produced hybrid cars, Toyota aims to manufacture sustainable cars that are kinder to the environment. In 1997 Toyota announced Prius, the world's first mass-produced hybrid vehicle. The Environmental Protection Agency (EPA) rated all versions of Prius among the cleanest vehicles based on their 2009 – 2017 carbon dioxide emissions. In 2018, Prius was selected as an “Ultra Low Emission Vehicle”, meaning the car produces ninety-percent lower emissions compared to regular cars. Additionally, thanks to Prius advanced hybrid technology, the car reduces greenhouse gas emissions up to one tonne per year, based on an average consumer's daily car usage. Thus, Toyota is one of the sustainable car manufacturers that sets industry standards and helps us to create a better future by saving our world's natural resources.

How well did you understand the text above?

Did not understand at all						Understood very well
1	2	3	4	5	6	7

According to the text, how would you rate the quality of Starbucks?

	Very Low					Very High
Starbucks	1	2	3	4	5	6 7

According to the text, how would you rate the sustainability of Starbucks?

	Very Low					Very High
Starbucks	1	2	3	4	5	6 7

		Strongly Disagree	Disagree	Neither Agree	Strongly Agree
I help others even when there is no direct benefit to me.	1	2	3	4	5
I can give away my things to someone who needs it more than I do.	1	2	3	4	5
I am very concerned for the well-being of other people, even if I don't know them personally.	1	2	3	4	5
When I see individuals in need, I try to find a way to help them.	1	2	3	4	5

What do you think the purpose of this study is?

Survey 3: Regular Toyota- Reading Comprehension Pretest

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how reading comprehension relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 2-3 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution to the survey.

Please read the text carefully and answer the questions that follow.



Toyota offers stylish and budget-friendly cars that provide smooth driving experiences to its customers. With Toyota's newest generation of Corolla, car enthusiasts are excited by the attractive and modern design with a sophisticated combination of style and equipment. Its LED lighting technology not only provides excellent power and visibility but also forms stylish and sharp curves that are compatible with the car's sleek design. Inside the car, high-quality plastic materials are combined with excellent design features to give a stylish and sporty experience. Interior lighting throughout the cabin with a cool shade of blue and sport seats are complemented with partial leather to complete the sporty feel inside the car. Thanks to its design features, the new Toyota Corolla provides an overall excellent driving experience and looks great both inside and out.

How well did you understand the text above?

Did not						Understood
understand at all						very well
	1	2	3	4	5	6 7

According to the text, how would you rate the quality of Starbucks?

	Very Low					Very High
Starbucks	1	2	3	4	5	6 7

According to the text, how would you rate the sustainability of Starbucks?

	Very Low					Very High
Starbucks	1	2	3	4	5	6 7

			Strongly			Strongly
			Disagree	Disagree	Neither	Agree
						Agree
I help others even when there is no direct benefit to me.	1	2	3	4	5	
I can give away my things to someone who needs it more than I do.	1	2	3	4	5	
I am very concerned for the well-being of other people, even if I don't know them personally.	1	2	3	4	5	
When I see individuals in need, I try to find a way to help them.	1	2	3	4	5	

What do you think the purpose of this study is?

Survey 4: Sustainability Starbucks- Reading Comprehension Pretest

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how reading comprehension relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Completing the questionnaire will take to 2-3 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. Thank you for your contribution to the survey.

Please read the text carefully and answer the questions that follow.



Starbucks takes sustainability seriously. Starbucks is committed to “Fair Trade” practices, which helps ensure that coffee bean growers work in acceptable conditions and receive fair pay. Starbucks also aims to build new stores or convert existing stores around the world to become eco-friendly by 2025. These stores will include sustainable features such as energy-efficient appliances that reduce water and power usage, LED lighting to lower energy consumption, and use sustainable construction materials. Recycling bins are found at every Starbucks, and coffee grounds are given away for free to customers, for use as fertilizer. By these efforts – Fair Trade sourcing, creating greener stores, and promoting recycling, among other initiatives, Starbucks is working toward its goals of becoming the world’s most sustainable coffee company and making the world a greener place.

How well did you understand the text above?

Did not						Understood
understand at all						very well
	1	2	3	4	5	6 7

According to the text, how would you rate the quality of Starbucks?

	Very Low					Very High
Starbucks	1	2	3	4	5	6 7

According to the text, how would you rate the sustainability of Starbucks?

	Very Low					Very High
Starbucks	1	2	3	4	5	6 7

			Strongly			Strongly
			Disagree	Disagree	Neither	Agree
						Agree
I help others even when there is no direct benefit to me.	1	2	3	4	5	
	1	2	3	4	5	
I can give away my things to someone who needs it more than I do.						
I am very concerned for the well-being of other people, even if I don't know them personally.	1	2	3	4	5	
When I see individuals in need, I try to find a way to help them.	1	2	3	4	5	

What do you think the purpose of this study is?

F. Experiment I Survey Samples

Survey 1: Luxury Car Scenario

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how reading comprehension relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Also, if you have any friends that are eligible to contribute to this research, we request not to discuss the survey and questions with them so that they can have a chance to participate. Prior knowledge of this survey can invalidate the results of the study. For this, we deeply appreciate your cooperation. Completing the questionnaire will take about 3-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. If you have any concerns or questions regarding this research, you can contact Sidar Yurteri via e234127@metu.edu.tr. Thank you for your participation.

Please unscramble car brand names below by using given letters and answer questions that follow.

ERPOSCH: _____

FEARIRR: _____

LABMORHIGNI: _____

SEDMEREC: _____

MWB: _____

IDA U: _____

For your information here are the correct brand names.

PORSCHE

FERRARI

LAMBORGHINI

MERCEDES

BMW

AUDI

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
My life would be better if I owned certain things I do not have.	1	2	3	4	5
I would be happier if I could afford to buy more things.	1	2	3	4	5
It sometimes bothers me very much that I can't afford to buy all the things I'd like.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I'd be willing to ride a bicycle or take the bus to school in order to reduce air pollution.	1	2	3	4	5
It is important for me that products I use do not harm the environment.	1	2	3	4	5
I am concerned about wasting the resources of our planet.	1	2	3	4	5
I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5
Environmental protection is important to me when making purchases.	1	2	3	4	5
I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	1	2	3	4	5
I feel sense of responsibility for workers in lower income countries that produce things I buy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.	1	2	3	4	5
I make an effort to avoid products or services that cause environmental damage.	1	2	3	4	5
When buying foods, I pay attention to “fair trade labels” indicating that people growing and working in food production are treated fairly.	1	2	3	4	5
I will not buy a product if the company that sells it is ecologically irresponsible.	1	2	3	4	5
When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	1	2	3	4	5
I make an effort to buy products and services from companies that pay all their employees a living wage.	1	2	3	4	5

What is your gender?

What is your age?

What is your nationality?

Female ____ Male ____ _____

Please indicate your level of education (university/Master/PhD): _____

About how much is your monthly spending money?

- a) ____ Under 500 TL
- b) ____ Between 500 – 999 TL
- c) ____ Between 1000 – 1499 TL
- d) ____ Between 1500-1999 TL
- e) ____ 2000 TL or more

For brand that you unscrambled, please indicate how luxurious they are.

Not at all					Totally
Luxury brands					Luxury brands
1	2	3	4	5	

Survey 2: Regular Clothing Scenario

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how reading comprehension relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Also, if you have any friends that are eligible to contribute to this research, we request not to discuss the survey and questions with them so that they can have a chance to participate. Prior knowledge of this survey can invalidate the results of the study. For this, we deeply appreciate your cooperation. Completing the questionnaire will take about 3-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. If you have any concerns or questions regarding this research, you can contact Sidar Yurteri via e234127@metu.edu.tr. Thank you for your participation.

Please unscramble clothing brand names below by using given letters and answer questions that follow.

I M V A : _____

& M H : _____

T O N O K : _____

F A D E C T O : _____

L W C A I I K I I : _____

L O I C N S : _____

For your information here are the correct brand names

MAVİ

H & M

KOTON

DEFACTO

LCWAIKIKI

COLIN'S

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
My life would be better if I owned certain things I do not have.	1	2	3	4	5
I would be happier if I could afford to buy more things.	1	2	3	4	5
It sometimes bothers me very much that I can't afford to buy all the things I'd like.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I'd be willing to ride a bicycle or take the bus to school in order to reduce air pollution.	1	2	3	4	5
It is important for me that products I use do not harm the environment.	1	2	3	4	5
I am concerned about wasting the resources of our planet.	1	2	3	4	5
I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5
Environmental protection is important to me when making purchases.	1	2	3	4	5
I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	1	2	3	4	5
I feel sense of responsibility for workers in lower income countries that produce things I buy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.	1	2	3	4	5
I make an effort to avoid products or services that cause environmental damage.	1	2	3	4	5
When buying foods, I pay attention to “fair trade labels” indicating that people growing and working in food production are treated fairly.	1	2	3	4	5
I will not buy a product if the company that sells it is ecologically irresponsible.	1	2	3	4	5
When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	1	2	3	4	5
I make an effort to buy products and services from companies that pay all their employees a living wage.	1	2	3	4	5

What is your gender?

What is your age?

What is your nationality?

Female ____ Male ____

Please indicate your level of education (university/Master/PhD): _____

About how much is your monthly spending money?

- a) ____ Under 500 TL
- b) ____ Between 500 – 999 TL
- c) ____ Between 1000 – 1499 TL
- d) ____ Between 1500-1999 TL
- e) ____ 2000 TL or more

For brand that you unscrambled, please indicate how luxurious they are.

Not at all					Totally
Luxury brands					Luxury brands
1	2	3	4	5	

Survey 3: Regular Car Scenario

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how reading comprehension relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Also, if you have any friends that are eligible to contribute to this research, we request not to discuss the survey and questions with them so that they can have a chance to participate. Prior knowledge of this survey can invalidate the results of the study. For this, we deeply appreciate your cooperation. Completing the questionnaire will take about 3-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. If you have any concerns or questions regarding this research, you can contact Sidar Yurteri via e234127@metu.edu.tr. Thank you for your participation.

Please unscramble car brand names below by using given letters and answer questions that follow.

N A S S I N: _____

T A I F: _____

S I Z U U K: _____

H U Y D A I N: _____

H A N D O: _____

R A N E U T L: _____

For your information here are the correct brand names

NISSAN

FIAT

SUZUKI

HYUNDAI

HONDA

RENAULT

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
My life would be better if I owned certain things I do not have.	1	2	3	4	5
I would be happier if I could afford to buy more things.	1	2	3	4	5
It sometimes bothers me very much that I can't afford to buy all the things I'd like.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I'd be willing to ride a bicycle or take the bus to school in order to reduce air pollution.	1	2	3	4	5
It is important for me that products I use do not harm the environment.	1	2	3	4	5
I am concerned about wasting the resources of our planet.	1	2	3	4	5
I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5
Environmental protection is important to me when making purchases.	1	2	3	4	5
I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	1	2	3	4	5
I feel sense of responsibility for workers in lower income countries that produce things I buy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.	1	2	3	4	5
I make an effort to avoid products or services that cause environmental damage.	1	2	3	4	5
When buying foods, I pay attention to “fair trade labels” indicating that people growing and working in food production are treated fairly.	1	2	3	4	5
I will not buy a product if the company that sells it is ecologically irresponsible.	1	2	3	4	5
When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	1	2	3	4	5
I make an effort to buy products and services from companies that pay all their employees a living wage.	1	2	3	4	5

What is your gender?

What is your age?

What is your nationality?

Female ____ Male ____ _____

Please indicate your level of education (university/Master/PhD): _____

About how much is your monthly spending money?

- a) ____ Under 500 TL
- b) ____ Between 500 – 999 TL
- c) ____ Between 1000 – 1499 TL
- d) ____ Between 1500-1999 TL
- e) ____ 2000 TL or more

For brand that you unscrambled, please indicate how luxurious they are.

Not at all					Totally
Luxury brands					Luxury brands
1	2	3	4	5	

Survey 4: Luxury Clothing Scenario

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how reading comprehension relates to attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time. Also, if you have any friends that are eligible to contribute to this research, we request not to discuss the survey and questions with them so that they can have a chance to participate. Prior knowledge of this survey can invalidate the results of the study. For this, we deeply appreciate your cooperation. Completing the questionnaire will take about 3-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. If you have any concerns or questions regarding this research, you can contact Sidar Yurteri via e234127@metu.edu.tr. Thank you for your participation.

Please unscramble clothing brand names below by using given letters and answer questions that follow.

GUICC : _____

CNEHAL : _____

DOIR : _____

MANARI : _____

BERRBURY : _____

TMMOY HIFLREGI : _____

For your information here are the correct brand names:

GUCCI

CHANEL

DIOR

ARMANI

BURBERRY

TOMMY HILFIGER

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
My life would be better if I owned certain things I do not have.	1	2	3	4	5
I would be happier if I could afford to buy more things.	1	2	3	4	5
It sometimes bothers me very much that I can't afford to buy all the things I'd like.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I'd be willing to ride a bicycle or take the bus to school in order to reduce air pollution.	1	2	3	4	5
It is important for me that products I use do not harm the environment.	1	2	3	4	5
I am concerned about wasting the resources of our planet.	1	2	3	4	5
I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5
Environmental protection is important to me when making purchases.	1	2	3	4	5
I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	1	2	3	4	5
I feel sense of responsibility for workers in lower income countries that produce things I buy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.	1	2	3	4	5
I make an effort to avoid products or services that cause environmental damage.	1	2	3	4	5
When buying foods, I pay attention to “fair trade labels” indicating that people growing and working in food production are treated fairly.	1	2	3	4	5
I will not buy a product if the company that sells it is ecologically irresponsible.	1	2	3	4	5
When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	1	2	3	4	5
I make an effort to buy products and services from companies that pay all their employees a living wage.	1	2	3	4	5

What is your gender?

What is your age?

What is your nationality?

Female ____ Male ____

Please indicate your level of education (university/Master/PhD): _____

About how much is your monthly spending money?

- a) ____ Under 500 TL
- b) ____ Between 500 – 999 TL
- c) ____ Between 1000 – 1499 TL
- d) ____ Between 1500-1999 TL
- e) ____ 2000 TL or more

For brand that you unscrambled, please indicate how luxurious they are.

Not at all					Totally
Luxury brands					Luxury brands
1	2	3	4	5	

G. Experiment II Survey Samples

Survey 1: Starbuck Regular Scenario

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how word puzzles may influence attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time.

If you have any friends that are eligible to contribute to this research, we request not to discuss the survey and questions with them so that they can have a chance to participate. Prior knowledge of this survey can invalidate the results of the study. For this, we deeply appreciate your cooperation.

Completing the questionnaire will take about 3-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. If you have any concerns or questions regarding this research, you can contact Sidar Yurteri via e234127@metu.edu.tr. Thank you for your participation.

Please read the text carefully and answer the questions that follow.



With almost 50 years of experience, Starbucks strives to provide the best quality of coffee to its customers. Starbucks manages every stage of the production process, starting from growing coffee beans to selling finished coffee products. Starbucks sources its coffee beans only from selected producers that maintain high quality standards so that each cup of coffee provides the same high quality to every customer. Starbucks only harvests coffee beans when they are red, mature and perfectly shaped. After coffee bean selection, Starbucks experts taste more than 1000 cups of coffee to guarantee superior quality. Finally, Starbucks uses patented roasting technology and special vacuum sealed packaging to lock in flavor and freshness until it reaches customers. By following these steps, Starbucks provides the highest quality coffee for its customers around the world.

Please proceed to the next page.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I help others even when there is no direct benefit to me.	1	2	3	4	5
I can give away my things to someone who needs it more than I do.	1	2	3	4	5
I am very concerned for the well-being of other people, even if I don't know them personally.	1	2	3	4	5
When I see individuals in need, I try to find a way to help them.	1	2	3	4	5
	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I'd be willing to ride a bicycle or take the bus to school in order to reduce air pollution.	1	2	3	4	5
It is important for me that products I use do not harm the environment.	1	2	3	4	5
I am concerned about wasting the resources of our planet.	1	2	3	4	5
I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5
Environmental protection is important to me when making purchases.	1	2	3	4	5
I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	1	2	3	4	5
I feel sense of responsibility for workers in lower income countries that produce things I buy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.	1	2	3	4	5
I make an effort to avoid products or services that cause environmental damage.	1	2	3	4	5
When buying foods, I pay attention to “fair trade labels” indicating that people growing and working in food production are treated fairly.	1	2	3	4	5
I will not buy a product if the company that sells it is ecologically irresponsible.	1	2	3	4	5
When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	1	2	3	4	5
I make an effort to buy products and services from companies that pay all their employees a living wage.	1	2	3	4	5

What is your gender?

What is your age?

What is your nationality?

Female ____ Male ____

Please indicate your level of education (university/Master/PhD): _____

About how much is your monthly spending money?

- a) ____ Under 500 TL
- b) ____ Between 500 – 999 TL
- c) ____ Between 1000 – 1499 TL
- d) ____ Between 1500-1999 TL
- e) ____ 2000 TL or more

According to the paragraph that you read at the beginning; how would you rate the sustainability of Starbucks?

Very Low

Very High

1 2 3 4 5 6 7

According to the paragraph that you read at the beginning; how would you rate the quality of Starbucks?

Very Low

Very High

High

1 2 3 4 5 6 7

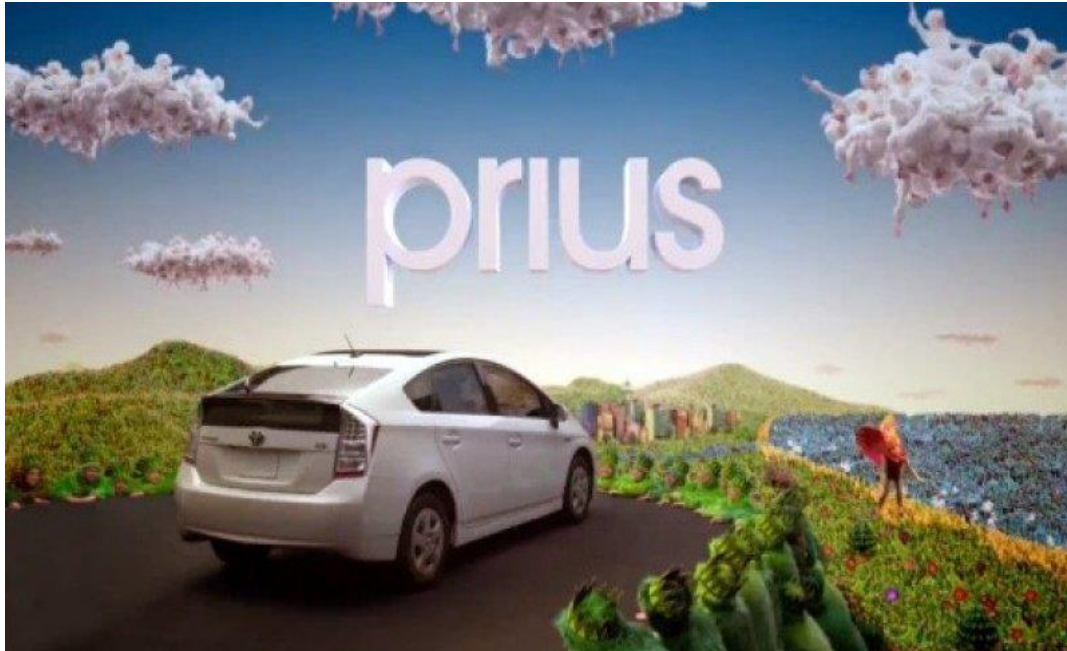
Survey 2: Toyota Sustainable Scenario

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how word puzzles may influence attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time.

If you have any friends that are eligible to contribute to this research, we request not to discuss the survey and questions with them so that they can have a chance to participate. Prior knowledge of this survey can invalidate the results of the study. For this, we deeply appreciate your cooperation.

Completing the questionnaire will take about 3-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. If you have any concerns or questions regarding this research, you can contact Sidar Yurteri via e234127@metu.edu.tr. Thank you for your participation.

Please read the text carefully and answer the questions that follow.



As one of the leading manufacturers of modern, mass-produced hybrid cars, Toyota aims to manufacture sustainable cars that are kinder to the environment. In 1997 Toyota announced Prius, the world's first mass-produced hybrid vehicle. The Environmental Protection Agency (EPA) rated all versions of Prius among the cleanest vehicles based on their 2009 – 2017 carbon dioxide emissions. In 2018, Prius was selected as an “Ultra Low Emission Vehicle”, meaning the car produces ninety-percent lower emissions compared to regular cars. Additionally, thanks to Prius advanced hybrid technology, the car reduces greenhouse gas emissions up to one tonne per year, based on an average consumer's daily car usage. Thus, Toyota is one of the sustainable car manufacturers that sets industry standards and helps us to create a better future by saving our world's natural resources.

Please proceed to the next page.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I help others even when there is no direct benefit to me.	1	2	3	4	5
I can give away my things to someone who needs it more than I do.	1	2	3	4	5
I am very concerned for the well-being of other people, even if I don't know them personally.	1	2	3	4	5
When I see individuals in need, I try to find a way to help them.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I'd be willing to ride a bicycle or take the bus to school in order to reduce air pollution.	1	2	3	4	5
It is important for me that products I use do not harm the environment.	1	2	3	4	5
I am concerned about wasting the resources of our planet.	1	2	3	4	5
I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5
Environmental protection is important to me when making purchases.	1	2	3	4	5
I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	1	2	3	4	5
I feel sense of responsibility for workers in lower income countries that produce things I buy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.	1	2	3	4	5
I make an effort to avoid products or services that cause environmental damage.	1	2	3	4	5
When buying foods, I pay attention to “fair trade labels” indicating that people growing and working in food production are treated fairly.	1	2	3	4	5
I will not buy a product if the company that sells it is ecologically irresponsible.	1	2	3	4	5
When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	1	2	3	4	5
I make an effort to buy products and services from companies that pay all their employees a living wage.	1	2	3	4	5

What is your gender?

What is your age?

What is your nationality?

Female ____ Male ____

Please indicate your level of education (university/Master/PhD): _____

About how much is your monthly spending money?

- a) ____ Under 500 TL
- b) ____ Between 500 – 999 TL
- c) ____ Between 1000 – 1499 TL
- d) ____ Between 1500-1999 TL
- e) ____ 2000 TL or more

According to the paragraph that you read at the beginning; how would you rate the sustainability of Toyota?

Very Low

Very High

1 2 3 4 5 6 7

According to the paragraph that you read at the beginning; how would you rate the quality of Toyota?

Very Low

Very High

High

1 2 3 4 5 6 7

Survey 3: Toyota Regular Scenario

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how word puzzles may influence attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time.

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Completing the questionnaire will take about 3-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. If you have any concerns or questions regarding this research, you can contact Sidar Yurteri via e234127@metu.edu.tr. Thank you for your participation.

Please read the text carefully and answer the questions that follow.



Toyota offers stylish and budget-friendly cars that provide smooth driving experiences to its customers. With Toyota's newest generation of Corolla, car enthusiasts are excited by the attractive and modern design with a sophisticated combination of style and equipment. Its LED lighting technology not only provides excellent power and visibility but also forms stylish and sharp curves that are compatible with the car's sleek design. Inside the car, high-quality plastic materials are combined with excellent design features to give a stylish and sporty experience. Interior lighting throughout the cabin with a cool shade of blue and sport seats are complemented with partial leather to complete the sporty feel inside the car. Thanks to its design features, the new Toyota Corolla provides an overall excellent driving experience and looks great both inside and out.

Please proceed to the next page.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I help others even when there is no direct benefit to me.	1	2	3	4	5
I can give away my things to someone who needs it more than I do.	1	2	3	4	5
I am very concerned for the well-being of other people, even if I don't know them personally.	1	2	3	4	5
When I see individuals in need, I try to find a way to help them.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I'd be willing to ride a bicycle or take the bus to school in order to reduce air pollution.	1	2	3	4	5
It is important for me that products I use do not harm the environment.	1	2	3	4	5
I am concerned about wasting the resources of our planet.	1	2	3	4	5
I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5
Environmental protection is important to me when making purchases.	1	2	3	4	5
I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	1	2	3	4	5
I feel sense of responsibility for workers in lower income countries that produce things I buy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.	1	2	3	4	5
I make an effort to avoid products or services that cause environmental damage.	1	2	3	4	5
When buying foods, I pay attention to “fair trade labels” indicating that people growing and working in food production are treated fairly.	1	2	3	4	5
I will not buy a product if the company that sells it is ecologically irresponsible.	1	2	3	4	5
When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	1	2	3	4	5
I make an effort to buy products and services from companies that pay all their employees a living wage.	1	2	3	4	5

What is your gender?

What is your age?

What is your nationality?

Female ____ Male ____

Please indicate your level of education (university/Master/PhD): _____

About how much is your monthly spending money?

- a) ____ Under 500 TL
- b) ____ Between 500 – 999 TL
- c) ____ Between 1000 – 1499 TL
- d) ____ Between 1500-1999 TL
- e) ____ 2000 TL or more

According to the paragraph that you read at the beginning; how would you rate the sustainability of Toyota?

Very Low

Very High

1 2 3 4 5 6 7

According to the paragraph that you read at the beginning; how would you rate the quality of Toyota?

Very Low

Very

High

1 2 3 4 5 6 7

Survey 4: Starbucks Sustainable Scenario

This research is carried out by Middle East Technical University graduate student, Sidar Yurteri. The objective of this survey is to understand how word puzzles may influence attitudes and behaviors. Participation to this survey is completely voluntary, and you can withdraw at any time.

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Completing the questionnaire will take about 3-5 minutes. Your responses to this survey will be kept confidential and your answers will be used only for research purposes. If you have any concerns or questions regarding this research, you can contact Sidar Yurteri via e234127@metu.edu.tr. Thank you for your participation.

Please read the text carefully and answer the questions that follow.



Starbucks takes sustainability seriously. Starbucks is committed to “Fair Trade” practices, which helps ensure that coffee bean growers work in acceptable conditions and receive fair pay. Starbucks also aims to build new stores or convert existing stores around the world to become eco-friendly by 2025. These stores will include sustainable features such as energy-efficient appliances that reduce water and power usage, LED lighting to lower energy consumption, and use sustainable construction materials. Recycling bins are found at every Starbucks, and coffee grounds are given away for free to customers, for use as fertilizer. By these efforts – Fair Trade sourcing, creating greener stores, and promoting recycling, among other initiatives, Starbucks is working toward its goals of becoming the world’s most sustainable coffee company and making the world a greener place.

Please proceed to the next page.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I help others even when there is no direct benefit to me.	1	2	3	4	5
I can give away my things to someone who needs it more than I do.	1	2	3	4	5
I am very concerned for the well-being of other people, even if I don't know them personally.	1	2	3	4	5
When I see individuals in need, I try to find a way to help them.	1	2	3	4	5
	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I'd be willing to ride a bicycle or take the bus to school in order to reduce air pollution.	1	2	3	4	5
It is important for me that products I use do not harm the environment.	1	2	3	4	5
I am concerned about wasting the resources of our planet.	1	2	3	4	5
I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5
Environmental protection is important to me when making purchases.	1	2	3	4	5
I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	1	2	3	4	5
I feel sense of responsibility for workers in lower income countries that produce things I buy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I limit my use of energy such as (electricity, natural gas, fossil fuel consumption) to reduce my harm on the environment.	1	2	3	4	5
I make an effort to avoid products or services that cause environmental damage.	1	2	3	4	5
When buying foods, I pay attention to “fair trade labels” indicating that people growing and working in food production are treated fairly.	1	2	3	4	5
I will not buy a product if the company that sells it is ecologically irresponsible.	1	2	3	4	5
When I purchase products, I always make a conscious effort to buy those products that are low in pollutants.	1	2	3	4	5
I make an effort to buy products and services from companies that pay all their employees a living wage.	1	2	3	4	5

What is your gender?

What is your age?

What is your nationality?

Female ____ Male ____

Please indicate your level of education (university/Master/PhD): _____

About how much is your monthly spending money?

- a) ____ Under 500 TL
- b) ____ Between 500 – 999 TL
- c) ____ Between 1000 – 1499 TL
- d) ____ Between 1500-1999 TL
- e) ____ 2000 TL or more

According to the paragraph that you read at the beginning; how would you rate the sustainability of Starbucks?

Very Low

Very High

1 2 3 4 5 6 7

According to the paragraph that you read at the beginning; how would you rate the quality of Starbucks?

Very Low

Very High

High

1 2 3 4 5 6 7

H. Starbucks Sustainable Marketing Strategy Example

