IMPLICATIONS OF MONEY PRIMING ON SUSTAINABLE CONSUMPTION

A THESIS SUBMITTED TO
THE BOARD OF GRADUATE PROGRAMS
OF
MIDDLE EAST TECHNICAL UNIVERSITY, NORTHERN CYPRUS CAMPUS

BY

UYGAR KORUK

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF SCIENCE
IN SUSTAINABLE ENVIRONMENT AND ENERGY SYSTEMS PROGRAM

JUNE 2023

Approval of the Board of Graduate Programs

Prof. Dr. Cumali Sabah
Chairperson

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Science

Assoc. Prof. Dr. Ceren İnce Derogar
Program Coordinator

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science.

Assoc. Prof. Dr. Carter Mandrik
Co-Supervisor

Asst. Prof. Dr. Ceren İnce Derogar
Supervisor

Examining Committee Members

Prof. Dr. Murah Fahrioğlu METU NCC/EEE _____

Assoc. Prof. Dr. Ceren İnce Derogar METU/NCC/CVE _____

Assoc. Prof. Dr. Carter Mandrik AUBG/BA _____

Asst. Prof. Dr. Hayriye Kahveci METU NCC/PSIR _____

Asst. Prof. Dr. Emete Toros UoK/BA _____

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last name: Uygar Koruk

Signature :

ABSTRACT

IMPLICATIONS OF MONEY PRIMING ON SUSTAINABLE CONSUMPTION

Koruk, Uygar

Master of Science, Sustainable Environment and Energy Systems Program

Supervisor: Assoc. Prof. Dr. Ceren İnce Derogar

Co-Supervisor: Assoc. Prof. Dr. Carter Mandrik

June 2023, 159 Pages

Sustainability has risen to become one of the most important issues facing humanity during the last few decades, associated with many negative consequences such as global warming, destruction of natural environment and poor living conditions of vulnerable communities. Unsustainable consumption behavior is seen as a major driver of these negative consequences, therefore fostering more sustainable consumption has become an urgent imperative. Many factors affect sustainable consumption, but the implications of money priming, the behavioral change of individuals by non-conscious exposure to the stimulus of money, has not been examined by researchers. It is important to study this relationship because money is a ubiquitous influence in human life, and prior research shows that money priming affects attitudes and behaviors that may be relevant to sustainable consumption. Hence, this thesis aims to explore the effects of money priming on sustainable consumption, specifically on sustainable consumption attitudes (SCAs). A literature review is conducted to identify possible factors that may affect consumers as variables associating money priming and sustainable consumption. Materialism and altruism values were demonstrated as variables that may act as a bridge linking the

effects of money priming and SCAs. Two experiments were conducted to reveal how money priming influences these values and how they impact SCAs. The results of Experiment 1 showed money priming increased materialism, which decreased SCAs. The findings of Experiment 2 indicated money priming decreased altruism, and decreased SCAs. The theoretical contributions and managerial implications of these results are discussed for the future research.

Keywords: Sustainable Consumption, Priming, Money Priming, Materialism, Altruism

ÖZ

PARA HAZIRLAMASININ SÜRDÜRÜLEBİLİR TÜKETİM ÜZERİNDEKİ ETKİLERİ

Koruk, Uygar
Yüksek Lisans, Sürdürülebilir Çevre ve Enerji Sistemleri Programı
Tez Yöneticisi: Doç. Dr. Ceren İnce Derogar
Ortak Tez Yöneticisi: Doç. Dr. Carter Mandrik

Haziran 2023, 159 Sayfa

Sürdürülebilirlik, küresel ısınma, doğal çevrenin yok edilmesi ve savunmasız toplulukların kötü yaşam koşulları gibi birçok olumsuz sonuçla bağlantılı olarak, son birkaç on yılda, insanlığın karşı karşıya olduğu en önemli meselelerden biri haline gelmiştir. Sürdürülebilir olmayan tüketim davranışları, bu olumsuz sonuçların ana itici gücü olarak görülmektedir, bu nedenle daha sürdürülebilir tüketimi teşvik etmek acil bir zorunluluk haline gelmiştir. Pek çok faktör sürdürülebilir tüketimi etkilemektedir, ancak bireylerin para uyarıcısına bilinçsizce maruz kalmasıyla davranış değişikliklerine neden olan para hazırlamasının sonuçlarının sürdürülebilir tüketim üzerindeki etkileri araştırmacılar tarafından incelenmemiştir. Bu ilişkiyi incelemek önem arz etmektedir, bunun nedeni; para, insan yaşamında her yerde bulunan bir tesirdir ve önceki araştırmalar, para hazırlamasının sürdürülebilir tüketimle ilgili olabilecek tutum ve davranışları etkileyebileceğini göstermektedir. Bu nedenle, bu tez sürdürülebilir tüketim, özellikle sürdürülebilir tüketim tutumları (STT'ları) üzerindeki para hazırlamasının etkilerini araştırmayı amaçlamaktadır. Para hazırlaması ve sürdürülebilir tüketimi ilişkilendiren değişkenler olarak tüketicileri etkileyebilecek olası faktörleri belirlemek için bir literatür taraması yapılmıştır. Materyalizm ve diğerkâmlık değerleri, para hazırlamasının etkileri ve

STT'larının etkilerini birbirine bağlayan bir köprü görevi görebilecek değişkenler olarak gösterilmiştir. Para hazırlamasının bu değerleri nasıl etkilediğini ve sonucunda STT'larının nasıl değiştiğini ortaya çıkarmak için iki deney yapılmıştır. Deney 1'in sonuçları, para hazırlamasının STT'larını düşüren materyalizm değerini artırdığını göstermiştir. Deney 2'nin bulguları ise, para hazırlamasının diğerkâmlığı azalttığını ve böylece STT'larını azalttığını göstermiştir. Bu sonuçların teorik katkıları ve yönetsel sonuçları gelecekteki araştırmalar için tartışılmıştır.

Anahtar Kelimeler: Sürdürülebilir Tüketim, Hazırlama, Para Hazırlaması, Materyalizm, Diğerkamlık

This thesis is dedicated to the all people who believe sustainability should be an integral part of all humanity.

ACKNOWLEDGMENTS

First and foremost, I would like to express my utmost gratitude to my main advisor and thesis co-supervisor, Assoc. Prof. Dr. Carter Mandrik, for his unwavering guidance and support throughout the entire process of my thesis research. I am sincerely grateful for his invaluable mentorship and constant insights, which have played a crucial role in shaping the success of my study. His constructive criticisms, thoughtful feedback, and invaluable advice have been instrumental in my growth as a researcher, pushing me to strive for excellence and continually improve myself.

I also want to express my genuine gratitude to my thesis supervisor, Asst. Prof. Dr. Ceren İnce Derogar. Whenever I was in need for help, she always offered her support and made me feel confident and secure throughout my thesis research.

My special thanks go to the examining committee members of my thesis defense: Prof. Dr. Murat Fahrioğlu, Asst. Prof. Dr. Hayriye Kahveci, Asst. Prof. Dr. Emete Toros. Their valuable feedback and comments on my research were very insightful to me.

Lastly, special thanks goes to my mother Müzeyyen Erdoğan who was always there for me in all processes of my thesis work by granting her encouragement and thoughtful judgements in my though times.

TABLE OF CONTENTS

LIST OF TABLES

TABLES

LIST OF FIGURES

FIGURES

LIST OF ABBREVIATIONS

ABBREVIATIONS

AM: Altruism Measure

AVE: Average Variance Extracted

CFA: Confirmatory Factor Analysis

DF: Degrees of Freedom

DM: Difficuity Measure

EC: Environmental Cognition

ECM: Environmental Cognition Measure

GALS: Generative Altruism Scale

IPCC: International Panel on Climate Change

METU NCC: Middle East Technical University

MM: Materialism Measure

MVS: Materialism Value Scale

N: Sample Size

PCB: Perceived Behavior Control

SCA: Sustainable Consumption Attitude

SCAS: Sustainable Consumption Attitude Scale

SCB: Sustainable Consumption Behavior

SD: Standard Deviation

SDG: Sustainable Development Goal

SSM: Self Sufficiency Measure

TPB: Theory of Planned Behavior

TRA: Theory of Reasoned Action

UN: United Nations

VBNT: Value Belief Norm Theory

WBCSD: World Business Council for Sustainable Development

CHAPTER 1

INTRODUCTION

1.1 Chapter Summary

The first chapter of the thesis is composed of four parts. Firstly, the relevant background information will be presented by demonstrating the unsustainable development situation and showing the sustainable development paradigm as a solution (see Section 1.2.) Subsequently, as a remedy to the unsustainable development dilemma, sustainable consumption will be proposed along with its enablers and constraints (see Section 1.3.). Afterward, the money priming concept will be explained in conjunction with discussing the priming phenomena in general. In this section the research gaps in the literature and the research problem will be indicated as well (see Section 1.4). In the last part of Chapter 1, materialism and altruism values will be elucidated and their association with money priming will be described. The final section will also contain the research significance and potential study limitations after specifying the research question and aims. The section will be completed with the structural outline of the thesis (see Section 1.5).

1.2 Introduction

> *"The Earth is the only world known so far to harbor life. There is nowhere else, at least in the near future, to which our species could migrate. Visit? Yes. Settle? Not yet. Like it or not, for the moment, the Earth is where we make our stand. … To me, it underscores our responsibility to deal more kindly with one another and the preserve, and cherish, the pale blue dot; the only home we've ever known" (Sagan,1997, p. 13).*

Increasing concerns regarding global warming and scarce natural resources have led many countries to grasp the need for sustainable development. According to the Intergovernmental Panel on Climate Change's special report on climate change, it is evident that to limit the global average temperature to 1.5°C, systematic and radical measures should be taken into consideration by all countries (Shukla et al., 2019). The first main concern for unsustainability worldwide emerged in the early 1980s. In order to emphasize sustainable development, the Brundtland Commission was established by the United Nations in 1983. In the Brundtland Report, sustainable development was defined as "... development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). The significance of unsustainable development was one of the main topics of discussion within the commission, prompting interested parties to address this challenge. Then, the problem of unsustainable development has been addressed and tried to be tackled by focusing on four key areas: controlling the production of environmentally depleting materials and introducing new models for sustainable production (Braungart & McDonough, 2009), empowering governmental policies regarding sustainability (Adams, 2019), restructuring waste disposal and extraction practices (UNEP, 2015), and mitigating unsustainable consumption (Doppelt, 2012; Thogersen, 2014). Subsequently, the United Nations proposed 17 different sustainable development goals

in 2015 to address all pillars of sustainability, including economic, environmental, and societal levels. These goals aimed to provide a blueprint for countries to understand the objectives and strategies for sustainable development (Desa, 2016). It has been recognized that adopting sustainable development goals is a transformative process that will accelerate the progress required to achieve the target temperature and limit greenhouse gas emissions, which is another target pathway identified by the IPCC (Shukla et al., 2019). The Sustainable Development Goals consist of 17 different thematic objectives that form a roadmap for achieving sustainable practices across all areas, from production to consumption levels, and have been adopted by all 193 members of the UN (Lee et al., 2016). While most of the objectives in the sustainable development goals are cross-cutting, such as taking significant actions on climate change and preserving life on land or below water in a sustainable manner, Sustainable Development Goal 12 (Responsible Consumption and Production) is the only goal that specifically addresses fostering responsible/sustainable consumption and creating a consumer base with a pro-environmental mindset (Freyling, 2015). The investigation of Sustainable Development Goal 12 is crucial because it is the key determinant for creating green societies that ensure a better quality of life for future generations, mitigate reckless and impulsive consumption behavior, and foster sustainable lifestyles (UNEP, 2015, 2021). Consuming more than the Earth's capacity to supply, squandering, and disposing of resources recklessly raise pollution levels throughout the planet and put future generations at risk of not meeting their requirements (UNEP, 2015, 2021). As a result, policymakers and academics have recognized the importance of sustainable consumption practices in achieving SDG 12 and forming a sustainable global community. Consequently, they have begun to explore the factors that impact consumer behavior (Park et al., 2007). The next chapter will discuss the factors affecting sustainable consumption along with their clarification.

1.3 Sustainable Consumption

"What is good for the hive is good for the bees" - (Aurelius, 1894).

As implied by Marcus Aurelius in the quote above, the actions and influences individuals have on the environment directly reflect on them, given the indivisible bond between nature and humans. Therefore, any damage individuals cause to the environment through unsustainable consumption behaviors will ultimately harm them in return. In this section, the significance of sustainable consumption will be clarified. Furthermore, the enablers and barriers of sustainable consumption will be demonstrated, along with a brief explanation of the sustainable consumption process, touching upon prominent frameworks and theories in the literature.

The importance of sustainable consumption becomes more evident when considering the consequences of unsustainable consumption. According to the World Business Council for Sustainable Development (WBCSD), the world's population is projected to reach nine billion by 2050, with already 60% of the earth's ecosystem degraded. Furthermore, it is expected that natural resource consumption will increase by 170% by 2040, exceeding the earth's biocapacity (WBCSD, 2008). Another concerning statistic reveals that 70-80% of environmental impacts in Europe can be attributed to household purchases (Piligrimiene, 2020). The concerning issue is consumerism[1] culture is highly embedded in high-income groups who are responsible for the highest natural resource expenditure in the world (Hickel et al., 2022). An additional concern arises from the projection that the consumer class (the global middle class) is expected to reach up to 5 billion people by 2030. This implies that an additional

[1] Aspiration for utilizing goods and services as primary cultural mindset and viewing possession of goods as a most direct path to personal satisfaction, social status and national prosperity (Ekins, 1991).

2 billion individuals will participate in world consumer spending, further exacerbating global consumption expenditure (WBCSD, 2008). These circumstances have spurred the efforts of academics, policymakers, and interested parties who are actively seeking measures to mitigate this emerging catastrophe.

One of the pivotal steps taken to address the issue of unsustainable consumption was the definition of sustainable consumption during the 1994 Oslo Symposium. This event played a significant role in raising awareness about the detrimental effects of unsustainable consumption on economic, environmental, and societal levels. Fostering sustainable consumption has been proposed as the key solution to combat the problem of unsustainable consumption. Sustainable consumption is defined as "the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations" (Brundtland, 1994). Following the introduction of this term and its recognition, numerous researchers have put forth various definitions. Haws et al. (2014) described sustainable consumption as a consumption behavior that aims to preserve the environment. In addition, Gilg et al. (2015) proposed that sustainable consumption involves the adoption of a green lifestyle and purchasing green products[2]. Others researchers defined this construct as voluntary simplicity and embracing anti-consumption practices (Black, 2010; Shaw & Moraes, 2009).

Therefore, it is crucial to delve into the foundation and essence of sustainable consumption, as it has emerged as a prominent concept under continuous analysis across various disciplines to address unsustainability (Schrader & Thøgersen, 2011). Existing literature suggests that values, norms, and attitudes serve as direct antecedents to behaviors (Ajzen, 1991; Guagnano et al., 1995; Stern, 2000). Two theories, in particular, provide valuable insights into the relationship between these concepts in the

[2] Organic, environmentally-friendly, minimally packaged, recyclable products (Khaola et al., 2014).

context of sustainable consumption: the Value-Belief-Norm (VBNT) Theory (Stern, 2000) and the Theory of Planned Behavior (TPB) (Ajzen, 1991). Through VBNT Theory (Stern, 2000), the sustainable consumption process can be explained as favorable values towards sustainability translating into ecological awareness, which leads to a sense of responsibility for environmental protection and ultimately results in a pro-environmental personal norm. Similarly, the Theory of Planned Behavior (Ajzen, 1991) suggests that sustainable consumption behavior, or any behavior, requires the behavioral intention to engage in such behavior. This intention is influenced by three factors: personal norms, attitudes, and personal behavioral control.

The adoption of sustainable consumption attitudes (SCAs) and sustainable consumption behaviors (SCBs) at the individual level is widely recognized as crucial for achieving sustainable consumption on a societal level (Homer & Kahle, 1988; Peattie, 2010). Therefore, gaining a thorough understanding of the factors that influence individuals to adopt SCAs and SCBs is of utmost importance. Previous research has extensively examined various factors associated with SCAs and SCBs. Studies have consistently shown positive relationships between SCAs and SCBs and factors such as higher life satisfaction (Xiao & Li, 2011), environmental concern (Lestari et al., 2020), frugal behaviors (Suarez et al., 2020), internal locus of control (Pavalache-Ilie & Unianu, 2012), ethical obligations (Hosta & Zabkar, 2021), and higher levels of education (Meyer, 2015). Conversely, certain constructs have been found to have a negative association with SCAs and SCBs, including consumerism[3] and greed (Lander, 2018), faith in technology (Malodia & Bhatt, 2019), external locus of control (Cleveland et al., 2019), and lower levels of education (Meyer, 2015).

After examining the barriers and facilitating factors associated with sustainable consumption in the existing literature, it becomes apparent that one factor has received insufficient attention in terms of its potential relationship with sustainable consumption: the presence of money, whether physical or symbolic, as a stimulus

[3] Consumerism here used in a negative sense (see the footnote[1])

within an individual's immediate environment. Surprisingly, the effects of money on sustainable consumption have been largely overlooked in the current literature, despite money being a construct that arguably exerts one of the most powerful influences on human life. This knowledge gap highlights the need to investigate the effects of money on sustainable consumption and shed light on its impact by exploring its relationship with other specific constructs. The forthcoming sections of this thesis will delve into the study of money and its effects within the context of past research, employing a research paradigm known as "money priming". The methodology of money priming will be discussed, and its connection to motives for sustainable consumption will be analyzed. The concept of priming in general, as well as the specific application of money priming, will be elucidated in the subsequent section, along with an exploration of the research gaps present in the literature and the overarching research problem.

1.4 Money Priming

Before delving into the concept of money priming, it is necessary to provide an explanation of priming. Priming refers to the nonconscious influence on current behavior, which is triggered by previous exposure to stimuli that activate implicit memory (Schacter & Buckner, 1998). Since the effects of priming are not consciously perceived, many of individuals' daily behaviors may be influenced by nonconscious effects of various stimuli. Therefore, it is crucial to identify and analyze this phenomenon (Tulving & Schacter, 1990). Specifically, priming occurs when a specific stimulus enhances or diminishes the salience of certain values, attitudes, or motivations derived from personal experiences and collective knowledge, thereby resulting in subsequent behavioral changes (Chartrand & Jeferris, 2004). Priming research aims to investigate the effects of different stimuli on behavioral outcomes. However, a comprehensive examination of the impact of money as a stimulus is particularly significant, given that money is deeply ingrained in human life, with its presence or the mere thought of it being evident in various aspects of daily life.

To gain insight into the nonconscious effects of money-related ideas on subsequent behavior, it is essential to investigate the phenomenon of money priming. Money priming involves presenting cues that activate the mental representation of money outside of conscious awareness, thereby automatically triggering behaviors associated with that representation (Stajkovic et al., 2022, p. 1). Extensive research conducted by Vohs and colleagues (2006) initially examined the effects of money priming and revealed its impact on various aspects of individuals' behavior, motivation, and willingness to act. Through several experiments, it has been observed that money priming increases self-efficacy, antisocial behaviors, reduces willingness to help others, and promotes distancing oneself from others (Vohs et al., 2006). Building upon these findings, subsequent researchers have attempted to replicate the results or explore the effects of money priming on other dependent variables by conducting diverse experiments. It has been discovered that money priming is also associated with selfishness (Gasiorowska & Helka, 2012), decreased prosocial behavior (Mok & De Cremer, 2018), reduced empathy towards others (Molinsky et al., 2012), and even unethical decision-making (Gino et al., 2014).

The extant literature shows that the effects of money priming on resulting behaviors are mostly focused on the examination of the two dependent variables which are behavioral performance (i.e. completion of certain tasks) and selfishness including self-sufficiency (Stajkovic et al., 2022). On the other hand, the literature review shows that analysis of money priming's effect on sustainable consumption is almost absent in the current literature. As discussed earlier (refer to Section 1.2 and Section 1.3), sustainable consumption plays a crucial role in achieving sustainable development. Therefore, it is vital to explore the relationship between sustainable consumption and money priming. Currently, only one study has addressed this potential connection. Capaldi and Zelenski (2016) hypothesized that money priming would have a negative effect on individuals' willingness to engage in sustainable actions. However, due to conflicting results obtained from the two samples, the impact of money priming on willingness to perform sustainable behaviors could not be definitively determined (Capaldi & Zelenski, 2016).

Furthermore, it is worth noting that the scale utilized by Capaldi and Zelenski (2016) to measure participants' willingness to engage in sustainable behaviors did not include comprehensive items specifically designed to assess SCAs and SCBs. The willingness to perform sustainable behavior scale employed by Capaldi and Zelenski (2016) was adapted from Ferguson et al. (2011) which primarily focused on measuring intentions toward sustainable behavior and sustainable beliefs, without specifically targeting sustainable consumption (Ferguson et al., 2011). Additionally, Capaldi and Zelenski (2016) solely employed one money priming method, namely the phrase descrambling test, which was derived from Vohs and colleagues' experiment (Vohs et al., 2006). Therefore, this research aims to enhance and expand our understanding of money's effect on sustainable consumption by employing constructs that specifically measure the intended behavioral outcomes and employing different methods to examine if consistent effects can be observed.

Considering that the priming process involves enhancing or diminishing specific values, it is crucial to explore these values in relation to the primed stimulus. Understanding why certain behaviors occur and developing a comprehensive framework of the process necessitates the identification of values influenced by money priming. Therefore, this research will investigate two values that have been associated with both money priming and sustainable consumption but have not yet been explicitly linked: materialism and altruism. In the upcoming section, the definitions of these two values will be discussed, and it will be demonstrated how the subsequent behaviors of individuals primed with money align with the behaviors of highly materialistic individuals. Conversely, the behaviors of individuals with high altruistic values contrast with the resulting behaviors of those who have been primed with money. The next section will thoroughly demonstrate the money priming's association with materialism and altruism values and how they are related to sustainable consumption.

1.5 Money Priming's Relation to Materialism, Altruism and Sustainable Consumption

The existing literature emphasizes the significant role of values in shaping individuals' attitudes and behaviors (Ajzen, 2012; Schwartz & Bilsky, 1990). Consequently, values play a crucial role in consumer behavior research, as changes in values can influence consumption attitudes, which in turn have profound impacts on consumption behaviors (Vinson et al., 1977). Previous research suggests that the process of money priming occurs through the influence of money as a stimulus, which leads to behavioral changes by altering attitudes and specific values (Chartrand & Jefferis, 2004). In light of this, it is important to explore which values are affected by the stimulus of money and whether changes in these values can influence individuals' sustainable consumption behaviors. By examining the impact of money as an external stimulus on certain values, we can gain insights into its potential effects on sustainable consumption. Therefore, this research aims to investigate the specific values that are influenced by money priming and examine whether changes in these values have an impact on individuals' sustainable consumption behaviors.

The influence of personal values on sustainable consumption has been extensively explored within the literature on sustainable consumer behavior. While various values have been linked to sustainable consumption, including hedonism and power (Smyczek, 2020), responsibility, honesty, and helpfulness (Thogersen & Ölander, 2002), as well as compassion and courtesy (Sharma & Jha, 2017), two values, in particular, have demonstrated a close association with sustainable consumption: altruism and materialism. These two major value systems encompass many of the previously mentioned values, representing self-transcendence values (altruism) and self-enhancement values (materialism) (Dietz et al., 2005; Schwartz, 1992; Stern, 2000). Numerous studies have been conducted to investigate the effects of materialism and altruism on sustainable consumption within the existing literature (Gatersleben et al., 2010; Gilg et al., 2005; Khalid & Qadeer, 2017; Kilbourne & Pickett, 2008). These

studies have shed light on the relationship between these values and individuals' sustainable consumption behaviors, providing valuable insights into the complex interplay between personal values and sustainable consumer behavior.

Thus, it is crucial to define materialism and altruism values and explore their specific relationships with sustainable consumption. By understanding these values in the context of sustainable consumption, we can further investigate the effects of money priming on various behaviors that may align with the embodiment of materialism and altruism values, respectively. This approach will help supporting the central focus of the thesis, which aims to examine the connections between money priming, materialism and altruism values, and sustainable consumption. By examining these relationships, the thesis can contribute to a deeper understanding of how money priming influences individuals' values and subsequent behaviors related to sustainable consumption.

Materialism

Materialism is a value characterized by the belief that true satisfaction and success in life can only be attained through the acquisition of material possessions (Richins & Dawson, 1992). Belk (1985) further defines materialism as an inherent personality trait revolving around three main themes: non-generosity, possessiveness, and envy. Individuals with materialistic tendencies are more likely to prefer solitary activities over interpersonal engagements, exhibit reduced satisfaction with helping others financially (Richins & Dawson, 1992), and prioritize individualistic behaviors while attaching greater value to their public image (Wong, 1997). Interestingly, research has revealed noteworthy similarities between the effects of materialism values and the impacts of money priming on attitudes and behaviors. Money priming, for instance, has been found to increase individualism, decrease collectivism, promote self-efficacy with social distancing, and lead to apathy and reduced compassion towards others (Vohs, 2006; Broda, 2019; Vohs, 2015). Furthermore, studies by Gasiorowska and

Helka (2012) and Reutner and Wanke (2013) have shown a connection between money priming and selfishness or non-generosity. The existing literature suggests that the effects of money priming on individuals are akin to possessing high materialistic values, indicating that money priming may temporarily amplify the salience of materialism values. These observations highlight the potential relationship between money priming, materialism values, and their impact on individuals' attitudes and behaviors. By exploring these connections, the thesis can contribute to a deeper understanding of how money priming influences the activation of materialistic values and subsequent behaviors, particularly in the context of sustainable consumption.

Altruism

Altruism can be defined as engaging in voluntary behaviors that aim to benefit others, driven by compassion and without expecting anything in return (Büssing et al., 2013; Eisenberg & Miller, 1987). Altruism is positively associated with engaging in prosocial behaviors and displaying empathy towards others (Burks et al., 2012; Feigin & Owens, 2014). In contrast, the effects of money priming on individuals are often related to apathy and disconnection from others (Capaldi & Zelenski, 2016; Vohs, 2015). Unlike altruism, money priming has been found to decrease helping behavior and lower empathy levels (Mok & de Cremer, 2018; Pffefer & Devoe, 2009; Vohs et al., 2009). These contrasting relationships suggest a potential link between these two constructs. It is possible that money priming may diminish altruism, thus explaining the contrasting effects observed between money priming and altruism. By exploring the relationship between money priming, altruism, and their effects on behaviors, the thesis can provide valuable insights into the interplay between these constructs and their implications for sustainable consumption. Understanding how money priming affects altruism values and subsequent behaviors can contribute to a more comprehensive understanding of the underlying mechanisms influencing individuals' engagement in sustainable confsumption practices.

The Relationship between Sustainable Consumption and Materialism and Altruism

Contemporary research indicates a notable distinction in the relationship between materialism, altruism, and sustainable consumption. The value of materialism demonstrates a negative correlation with sustainable consumption (Costa et al., 2021; Hultman et al., 2015; Malodia & Bhatt, 2019; Suarez et al., 2020). Conversely, altruism exhibits a positive association with sustainable consumption (Bautista, 2020; Prakash et al., 2019; Kim et al., 2016; Wang et al., 2020). Building upon the existing literature, these aforementioned associations suggest that the effects of money priming could potentially decrease sustainable consumption by diminishing altruism and amplifying the prominence of materialism. Consequently, the main research questions addressed in this thesis are as follows:

RQ1: What is the effect of money priming on sustainable consumption ?

RQ2: What is the effect of money priming on materialism and altruism values, and how are they related to the change in sustainable consumption in this process?

The primary objective of this thesis is to expand upon the existing research on the impact of money priming on consumers, particularly in relation to their attitudes and behaviors towards sustainable consumption. This study intends to serve as the first empirical demonstration of the effects of money priming on altruism and materialism. Additionally, it aims to contribute to the literature by exploring the factors that constrain sustainable consumption. The final chapter of this thesis will address potential limitations, with particular focus on sample-related issues and the influence of confounding factors such as social desirability bias.

The upcoming chapter of the thesis will consist of a comprehensive literature review, examining the relevant constructs and theories to be employed. This review will serve as a foundation for the subsequent chapter, which focuses on hypothesis development. In this chapter, hypotheses derived from the literature review will be presented. Moving forward, the methodology chapter will provide a detailed explanation of the research

methodology employed in this study. It will outline the measures used to assess the relevant constructs and will also encompass the statistical testing and analyses conducted. The final chapter will be dedicated to the discussion and conclusion. This chapter will involve the crucial interpretation of key findings and their implications. Furthermore, it will provide recommendations for future research based on the outcomes of the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Chapter Summary

The literature review is conducted to examine the constructs that are mentioned in the first chapter. This chapter aims to scrutinize the existing coverage in the literature relevant to the research aims and questions to construct a conceptual development for the research. There are four sections in this chapter, in addition to the chapter summary. The second section gives relevant background information regarding sustainable consumption, characterization of the sustainable consumer, an explanation of the sustainable consumption attitudes(SCAs), sustainable consumption behaviors(SCBs), and the most dominant frameworks that are used to conceptualize the sustainable consumption process. The third section of the literature review mainly discusses the relationship between values and sustainable consumption by respectively focusing on altruism and materialism values. The fourth section is allocated to the examination of priming theory by particularly examining money priming. The last section concludes the literature review and acts as a bridge to the next chapter of the thesis.

2.2 The Overview Of Sustainable Consumption

2.2.1 The Background of Sustainable Consumption

> *"Everything in excess is opposed to nature." – Hippocrates (as cited in Durnford, 1915, p. 90).*

Contemporary research places significant emphasis on the impact of human behavior on the environment, particularly in relation to consumption patterns. The choices individuals make in terms of products, services, and lifestyle directly and indirectly affect the environment. This has led to the emergence of "sustainable consumption" as a crucial concern at both national and global levels (Jackson, 2005). In the past, environmental initiatives primarily focused on optimizing production processes to reduce pollution and improve resource efficiency (Mont & Plepsy, 2007). However, towards the end of the 20th century, the focus expanded to include waste management and disposal. While progress has been made in reducing resource consumption, the overall increase in consumption due to population growth and prosperity has offset these gains (Mont & Plepsy, 2007). Therefore, it became clear promoting sustainable consumption among individuals is vital for achieving sustainable development. Additionally, Michaelis (2022) argues that promoting sustainable consumption is not solely the responsibility of governmental authorities; businesses and non-governmental organizations must also align their operations with sustainability standards. Companies traditionally focused on improving eco-efficiency, but sustainable consumption requires broader changes, including incentives and cultural shifts that shape market expectations. Collaboration among businesses, policymakers, the media, and society is necessary to develop a new narrative that redefines wealth and highlights the role of businesses in supporting sustainability. Civil society plays a pivotal role in undertaking such initiatives (Michaelis, 2002). Furthermore, consumers must recognize their integral role in this pressing issue,

educate themselves about sustainable consumption, and learn how to embrace its principles.

The Definition of Sustainable Consumption

By analyzing two decades of research in the literature regarding sustainable consumption and compiling the preceding depictions, Quoquab and Mohammad established a holistic definition of the concept:

> "Sustainable consumption refers to the continued act of controlling desire by avoiding extravagant purchases and rationalized use of goods and services that satisfy the basic needs. It concerns the quality of life over material standards of living, suggests satisfying basic human needs (not the desire for "wants" and luxuries), demonstrates care for protecting and preserving the natural resources (e.g. minimizing resource use, waste and pollution) and keeping the natural resources useful for future generations (Quoquab & Mohammad, 2020,p.7)".

Hence, sustainable consumption is not solely about limiting consumption (Black, 2010; Shaw & Moraes, 2009) or selecting products and services that aim to maintain environmental integrity during their production or disposal phases (Gilg et al., 2005). It is an umbrella term that encompasses a way of living, adopting certain values and habits, and considering the well-being of future generations in all types of consumption practices.

The existing literature suggests that sustainable consumption is practiced by sustainable consumers who possess favorable SCAs and engage in SCBs (Jaiswal & Singh, 2018; Liu et al., 2012; Milfont & Markowitz, 2016; Nosi et al., 2020). Hence, this section will sequentially discuss all of these constructs, aiming to visualize the phenomenon of sustainable consumption through the frameworks proposed in the literature.

2.2.2 The Sustainable Consumer

In this part of the literature review, the sustainable consumer will be portrayed along with their SCAs and SCBs. It is important to acknowledge that researchers in the literature have used various terms interchangeably to refer to the sustainable consumer. For instance, the term "green consumer" was used by White et al. (2019), while Hosta and Zabkar (2020) defined it as the "environmentally and socially responsible consumer". Additionally, Dembkowski and Hanmer-Lloyd (1994) referred to it as the "environmentally-conscious consumer", and Marks (2017) regarded it as the "eco-consumer". Considering that these terms represent similar consumer traits, attitudes, or behaviors, for the sake of clarity, a single umbrella term, namely the "*sustainable consumer*", will be used in this thesis. It has been argued that the sustainable consumer is influenced by three main variables: environmental concern, psychological factors, and socio-demographic variables (Gilg et al., 2005). Environmental concern is considered as an individual's evaluation of their own or others' behaviors that impact the environment. When consumers have a high level of environmental concern, they are more likely to engage in sustainable consumption (Saari et al., 2021). Psychological factors influencing the sustainable consumer can be external, such as price, or internal, such as social responsibility and self-efficacy (Gilg et al., 2005). Furthermore, socio-demographic variables have been found to influence an individual's propensity for sustainable consumption. Hines et al. (1987) pointed out that the most sustainable consumers tend to be female, well-educated, young, and affluent. In a study aimed at identifying the sustainable consumer segment, it was observed that green consumers are more knowledgeable about the environment, have higher environmental concern, show a greater inclination towards recycling and saving, and are more likely to engage in sustainable buying behavior compared to other customer segments in the study (Leal Filho et al., 2009). Moreover, research has highlighted that sustainable consumers are more motivated to participate in sustainable purchases (Thogersen & Ölander, 2003), have a higher behavioral intention towards sustainable consumption (Barbarossa & De

Pelsmacker, 2014), and hold more positive attitudes towards sustainable consumption (Peattie, 2010) compared to non-sustainable consumers.

2.2.3 Sustainable Consumption Attitudes and Sustainable Consumption Behaviors

To gain a deeper understanding of the sustainable consumer, it is essential to explore the motives that underlie SCAs and SCBs. Therefore, this section will focus on reviewing the existing literature pertaining to this topic.

Sustainable Consumption Attitudes

When it comes to explaining SCAs, it is initially crucial to understand the formation of attitudes. Attitude is defined as "a psychological tendency expressed through the evaluation of a specific entity with varying degrees of favor or disfavor" (Eagly & Chaiken, 1993, p.1). According to Zanna and Rempel (1988), attitudes are formed based on three key components that serve as antecedents. Firstly, the "affective component" of attitude entails the emotions and feelings associated with the attitude entity (i.e., the object toward which the attitude is formed). The behavioral component involves accumulated ideas stemming from past behaviors associated with the attitude entity. Lastly, the cognitive component encompasses the values and beliefs linked to the attitude entity (Eagly & Chaiken, 1993; Zanna & Rempel, 1988). Additionally, knowledge is considered a reliable predictor of attitudes (Ahmad et al., 2015). Therefore, within the realm of sustainable consumption, SCAs are formed based on individuals' values, thoughts, and emotions concerning sustainability, as well as the influence of their previous behaviors and overall knowledge.

Forming favorable SCAs translate to having higher consumer intention towards buying sustainable products (Yadav & Pathak, 2016) which in the end becomes a strong predictor for the adoption of SCBs (Wei et al., 2017), therefore many academics are concerned with revealing the SCAs of the consumers or searching ways to make those

attitudes more positive (Eurobarometer, 2009; Hume, 2010; Panzone et al., 2016; White et al., 2019). The extant literature shows that there are various antecedents for holding positive SCAs: Lestari et al. (2020) noted that environmental concern, peer pressure and eco labels[4] are three important elements that have a positive relationship with favorable SCAs, Leonidou, (2010) highlighted that collectivism[5], deontology[6] , political action, and law obedience are antecedent factors for both inward and outwards environmental attitudes[7], Kusmantini et al. (2021) also shows that SCA has a positive relationship with environmental concern, along with perceived environmental knowledge and perceived consumer effectiveness[8].

[4] Eco-labels inform consumers about a product's environmental qualities. The purpose of eco-labels is to give straightforward and easy-to-understand information, as well as to boost demand for environmentally friendly products (Delmas & Grant, 2008).

[5] The extent to which people are integrated into communities (Hofstede, 2009).

[6] An outward environmental attitude refers to a person's engagement in society and its issues, particularly those pertaining to the conservation of the environment at a "public scale", as opposed to an inward environmental attitude, which influences more "private" pro-environmental acts (Stern, 2000).

[7] An outward environmental attitude refers to a person's engagement in society and its issues, particularly those pertaining to the conservation of the environment at a "public scale", as opposed to an inward environmental attitude, which influences more "private" pro-environmental acts (Stern, 2000).

[8] A consumer's estimation of his/her capability regarding how much he/she can contribute to particular sustainable development outcomes through certain behaviors (Hanss & Doran, 2020).

Sustainable Consumption Behavior

After examining SCA and its antecedent factors, it is essential to explore SCB in order to fully comprehend its consequences. Tripathi and Singh (2016, p. 323), through an extensive analysis of relevant studies, have defined sustainable consumption behavior as "Those consumers' behavior which improve social and environmental performance as well as meet their needs" (Frank-Martin & Peattie, 2009; Jackson, 2005; Jain & Kaur, 2006; Luchs & Mooradian, 2012; Roberts & Bacon, 1997; Sharp & Wells, 2013; Shrum et al., 1995; Tilikidou & Zotos, 1999; Wang et al., 2014; Zhao et al., 2014). This definition encompasses both environmental and social dimensions, highlighting that consumers who adopt such behaviors elicit both pro-environmental behaviors[9] and pro-social behaviors[10] at the same time. Acknowledging SCB certainly depends on understanding its enablers and barriers. Trudel (2018) shares valuable insights regarding this matter by reviewing the previous literature over two decades:

[9] Behaviors that strive for reducing the detrimental impacts of one's activities on the natural and built worlds such as lowering resource and energy use, utilizing non-toxic chemicals, and generating less waste (Kollmuss & Agyeman, 2002; Schlegelmilch et al., 1996).

[10] Behaviors that are taken out to benefit another individual through actions such as supporting, consoling, contributing, and collaborating without the expectation of rewards or incentives and are carried out for its own goal and purpose (Bar-Tal, 1986; Wiener & Doesher, 1991).

Table 2. 1. Enablers and Barriers to Sustainable Concumption Behavior

Enablers of SCB	Barriers of SCB
Governmental incentives (i.e. price inducements and tax reductions).	Present bias and cognitive myopia (Misinterpretation of consumers regarding the future benefits of sustainable consumption) (Weber, 2017).
Using nudges to influence consumers (i.e. using choice architecture which is displaying sustainable products as if they are the default choice rather than being alternatives to conventional products) (Kahneman et al, 1991).	Averting behaviors that are connected to the dissociative groups. (i.e. On account of stereotypical association, men avoiding sustainable behaviors to not be seen as feminine) (Brough et al., 2016).
Showing the consequences of unsustainability to the consumers in a more tangible manner rather than abstract messages (i.e. sustainable education and using eco-labels).	Psychological barriers (i.e. Making a purchasing decision with System 1 (The psychological process that results with giving fast and automatic decisions) over System 2 (The psychological process that is thoughtful and effortful as oppose to the System 1)) (Brothers et al., 1994; Sloman, 1996).
Having an environmental self-identity (Whitmarsh et al., 2010).	Group or social identity (i.e. Conservatives valuing sustainability lower than liberals).

Enablers and barriers to SCB indicate that engaging in SCB is influenced by various factors. Therefore, it is crucial to conceptualize SCB and gain a deeper understanding of the process. Quoquab and Mohammad (2020) conducted a systematic review on sustainable consumption, analyzing two decades of studies and publications to develop

a conceptual model of SCB. The model comprises three components: predictors of SCB, which initiate the SCB process and include elements such as values, motivation, and norms; mediators of SCB, which illustrate the relationship between predictors and SCB through factors like SCAs or consumer engagement; and moderators of SCB, which influence the strength of the consumer's final decision, taking into account demographics and consumer effectiveness (refer to Figure 2.1).

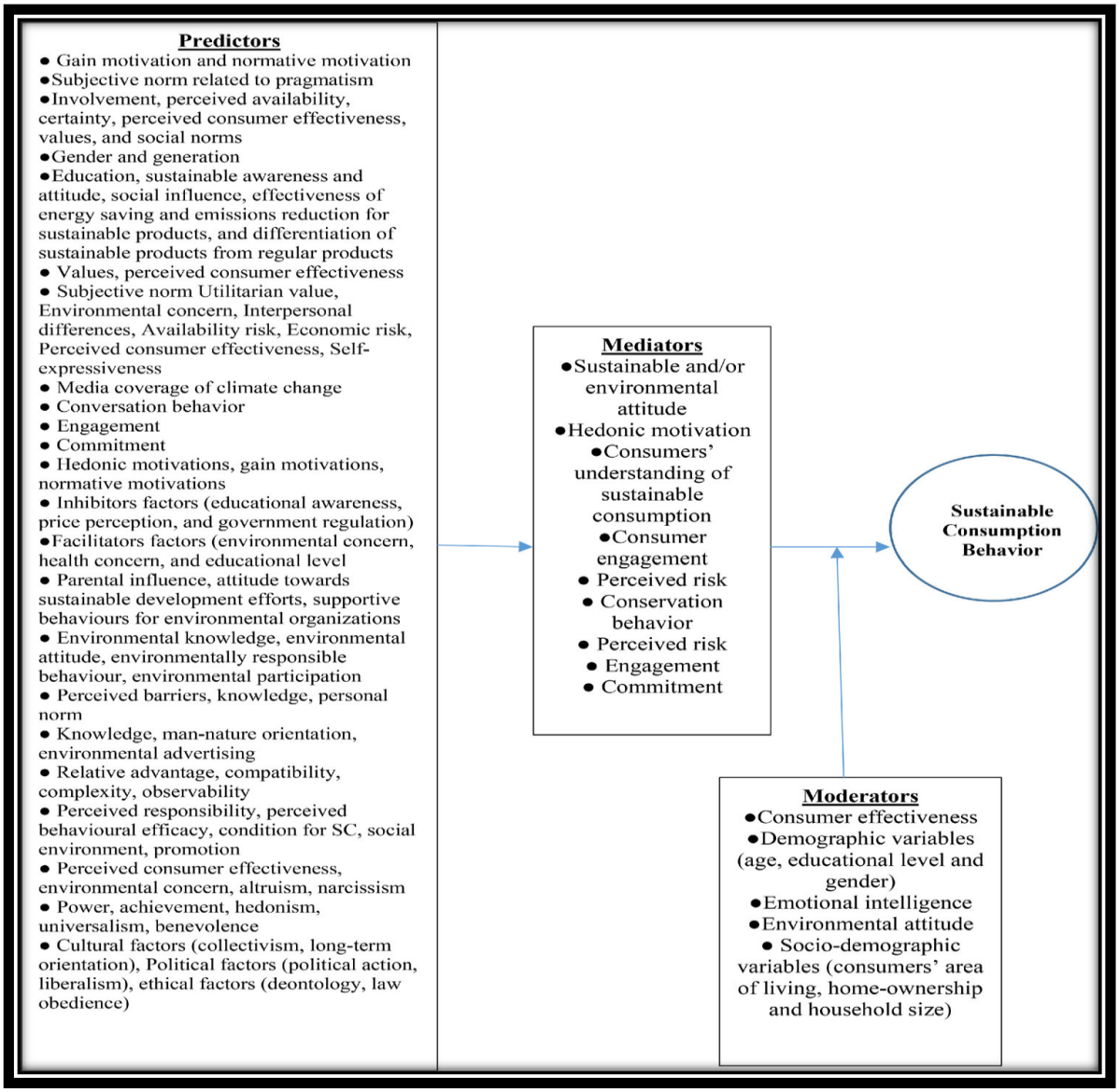

Figure 2. 1. Conceptual Model of Sustainable Consumption Behavior (Quoquab & Mohammad (2020).

2.2.4 The Attitude-Behavior Gap of Sustainable Consumption

In the subsequent section, the predictors and other elements that influence SCB will be analyzed in greater detail by examining the theoretical frameworks associated with the construct. However, before proceeding to the next segment, it is important to address a specific concern highlighted in the literature. Despite some consumers considering themselves highly committed to sustainable consumption, displaying a strong intention to engage in sustainable consumption and holding favorable attitudes towards it, their actual purchase behaviors often do not align with these claims. This phenomenon is commonly referred to as the attitude-behavior gap in sustainable consumption (Carrington et al., 2014; Essiz et al., 2022; Park & Lin, 2020).

Sustainable consumers are often considered as confused buyers due to their behavioral patterns. This confusion primarily stems from their lack of environmental awareness, limited environmental knowledge, and insufficient access to environmental information (Crane, 2000; Davis, 1993; Narula & Desore, 2015). To address these obstacles and bridge the attitude-behavior gap in sustainable consumption, several solutions have been proposed. First and foremost, consumer education plays a pivotal role in enhancing environmental awareness and knowledge. Nonprofit organizations and governmental agencies should take the initiative to promote green education. Additionally, to improve the availability of sustainable products, more brands should enter the sustainability market and manufacture environmentally friendly products. This approach not only enhances brand value but also fosters positive brand reputation (Bonini & Oppenheim, 2008). Another significant barrier contributing to the sustainable attitude-behavior gap is the high cost associated with green products and consumer skepticism towards green claims. To make the purchase of green products more appealing, regardless of their price tags, it is crucial to highlight their long-term cost-saving benefits. Companies can achieve this by utilizing labels that display the annual energy usage of their products along with the related cost benefits. Rebuilding consumer trust requires companies to actively participate in sustainable actions rather

than merely making promises. Recent greenwashing[11] scandals have eroded consumer trust, and this trust can only be restored if companies provide transparent information about their true environmental impacts (Bonini & Oppenheim, 2008). Additional solutions for narrowing the attitude-behavior gap, applicable to both companies and policymakers, include emphasizing experiences over ownership, leveraging social influence, and fostering positive habits in society (White et al., 2019). Encouraging experiences rather than material ownership can be achieved by showcasing models that emphasize the value of experiential consumption. Utilizing social influence involves establishing social norms that promote sustainable consumption behavior and demonstrating the positive outcomes of such behavior to the general public. Lastly, fostering good habits within society involves providing incentives for sustainable practices and making sustainable consumption the default choice by consistently offering consumers feedback and prompts (White et al., 2019).

2.2.5 Sustainable Consumption Frameworks

After presenting an archetype of a sustainable consumer and discussing sustainable consumption attitudes and behaviors, the analysis now turns to examining the pertinent sustainable consumption frameworks in the literature. In this section, several widely utilized sustainable consumption frameworks will be reviewed to shed light on the underlying factors that drive sustainable consumption behaviors.

Theory of Reasoned Action and Theory of Planned Behavior

The relationship between a sustainable consumer's SCAs and their exertion of SCBs has been widely discussed in the literature. Scholars have often employed the Theory of Planned Behavior (TPB) framework, developed by Ajzen (1985), to explain this

[11] The practice of "greenwashing" involves deceiving customers about a firm's sustainability policies or about the advantages a product or service has for the environment (Delmas & Burbano, 2011).

connection in their studies on sustainable consumer behavior (Ayar & Gürbüz, 2021; Liobikiene et al., 2016; Matharu et al., 2020; Vantamay, 2018; Yang et al., 2018).

The TPB framework was originally developed to elucidate the antecedent factors of behavior. Initially, Ajzen and Fishbein (1980) introduced the Theory of Reasoned Action (TRA) prior to TPB. The TRA model posits that behavior is influenced by behavioral intention, which is shaped by subjective norms and attitudes. Subsequently, in light of examining the model with respect to specific dependent variables and discussing unresolved outcomes, the model was expanded by incorporating an additional factor, namely perceived behavioral control (Ajzen, 1985; Ajzen, 1987; Fishbein & Ajzen, 1975). According to the TPB framework, for a behavior to be enacted, there must be a behavioral intention towards that behavior. Behavioral intention is influenced by three antecedents: attitude toward the behavior, subjective norms, and perceived behavioral control (refer to Figure 2.2). Attitude formation, as explained by Fishbein and Ajzen (1975), is based on the expectancy-value model of attitudes. This model suggests that attitudes are formed through individual beliefs, where certain individuals attribute positive or negative value to specific behaviors, thereby influencing their participation in such behaviors. Subjective norms, another antecedent in the model, are described as moral responsibility or a commitment to engage in a particular behavior. Personal ethics and moral systems shape behavioral intentions. Lastly, perceived behavioral control (PBC), the additional antecedent incorporated into the model, refers to the perceived difficulty or efficacy in performing a behavior. Individuals are more likely to engage in a behavior if they perceive themselves as having favorable resources and sufficient perceived ability. Conversely, if they perceive barriers and drawbacks to enacting a behavior, they tend to avoid it. These three antecedent factors (attitude, subjective norms, and perceived behavioral control) mutually influence each other, ultimately shaping behavioral intention, which is considered an indication of the individual's willingness to carry out the behavior (Ajzen, 1991).

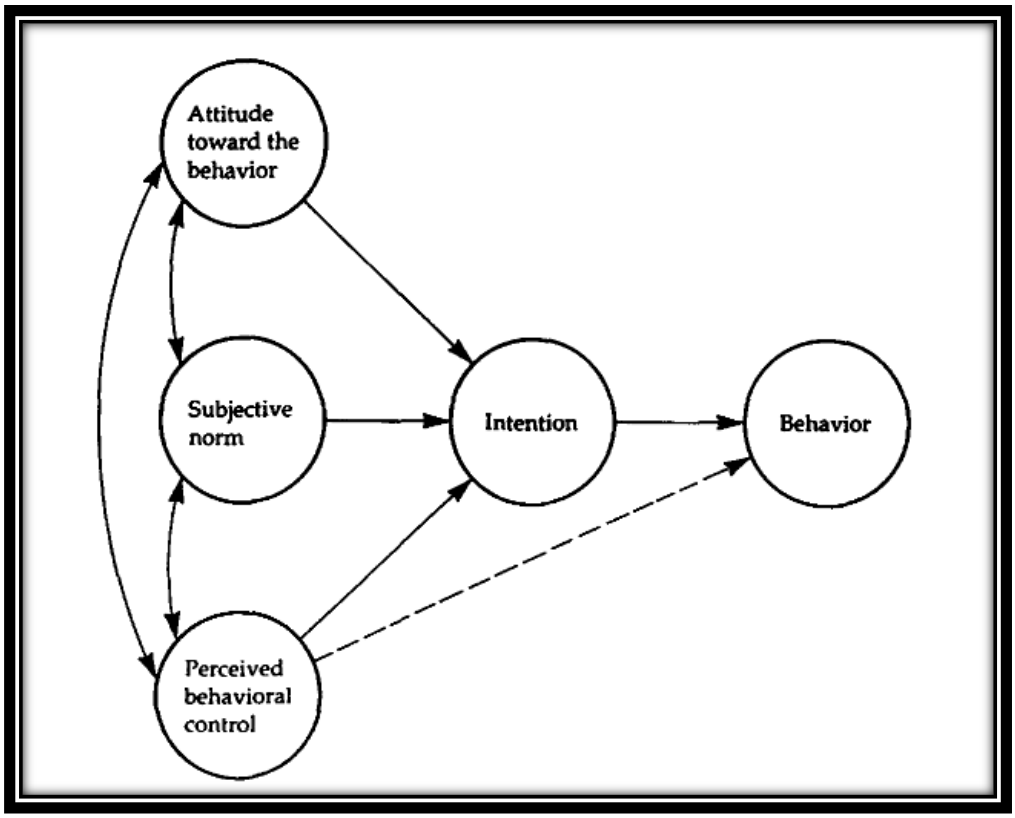

Figure 2. 2. Theory of Planned Behavior (Ajzen, 1991)

Given that the TPB framework continues to be widely employed as a foundational basis for analyzing individual behaviors, it is natural that it is also utilized for explaining sustainable consumption behavior. Researchers have either expanded upon or directly applied this theoretical framework to elucidate the process of sustainable consumption. When consumers hold favorable attitudes towards sustainable consumption, exhibit supportive value judgments regarding sustainable consumption practices (subjective norms), and possess sufficient resources to engage in sustainable consumption (perceived behavioral control), their likelihood of engaging in sustainable consumption behavior (behavioral intention) is established, resulting in the occurrence of sustainable consumption behavior (Alam et al., 2020; Maichum et al., 2016; Paul et al., 2016; Scalco et al., 2017; Wu & Chen, 2014).

Decision Making Model of Sustainable Consumption

The understanding of sustainable consumption is further enriched by examining the consumer decision-making process prior to making a purchase. Numerous researchers have contributed to the formulation of decision-making models for sustainable consumption (Balderjahn, 2013; Carrington et al., 2010; Vermeier & Verbeke, 2006). Building upon these models, Terlau and Hirsch (2015) developed a more holistic consumer decision model that comprehensively represents the factors influencing this process (refer to Figure 2.3).

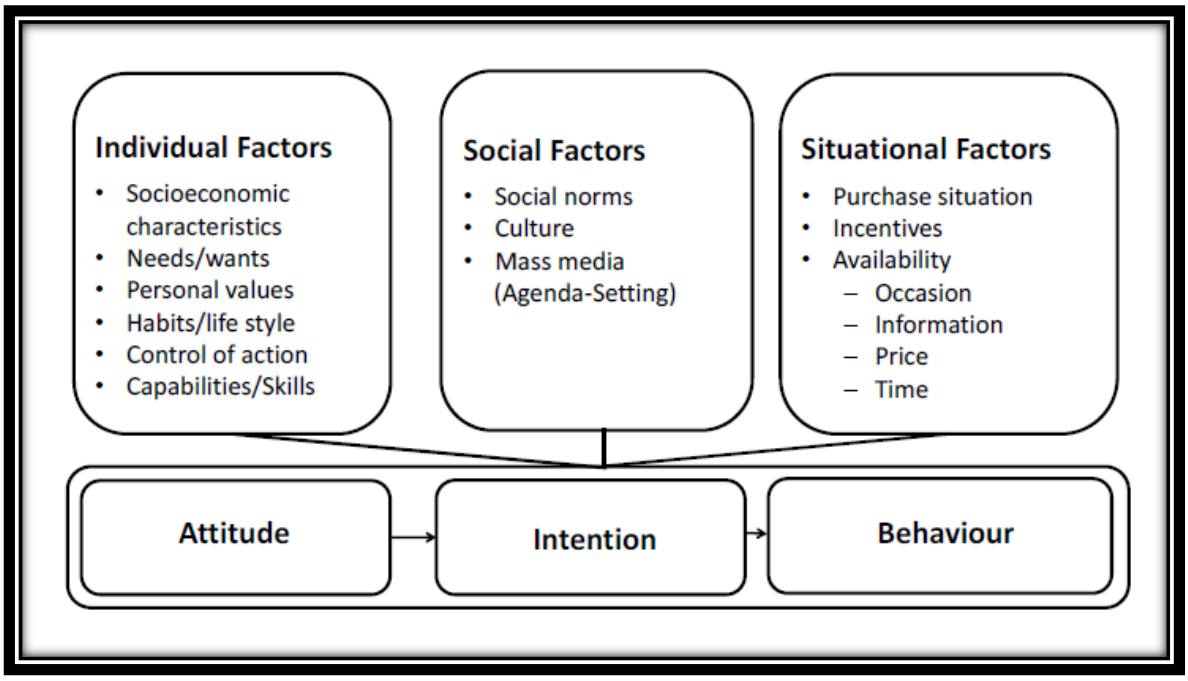

Figure 2. 3. Sustainable Consumption Decision Making Model (Terlau & Hirsch, 2015) based on Balderjahn (2013), Carrington et al. (2010) and Vermeier and Verbeke (2006).

The sustainable consumption decision model incorporates a similar attitude, intention, and behavior relationship as observed in the TPB framework (Ajzen, 1985). However, this model also identifies three primary factors that influence the decision-making process. The first factor pertains to individual considerations, which encompass consumer-specific determinants such as values, desires, needs, and

competencies. These factors shape consumer attitudes and subsequently contribute to the formation of behavioral intentions. The second crucial component consists of social factors, encompassing external elements that directly influence consumer decisions. These factors include cultural influences, social norms, and exposure to media. The final determinant in the model is situational factors, which primarily impact the decision during the actual purchase process. These factors encompass product availability, political incentives, and the consumer's purchasing situation.

Norm-Activation Theory of Altruism and New Ecological Paradigm

In order to fully comprehend the last theoretical framework, it is important to discuss two influential studies that hold significant relevance in the field of sustainability and environmental research. These studies have made notable contributions to the literature and provide valuable insights that will enhance our understanding of the subsequent model.

1- The Norm-Activation Theory of Altruism: According to the theory, individuals engage in sustainable actions due to their personal norms, which are activated when they encounter environmental consequences that pose a threat to society or the biosphere. As a result of these consequences, individuals feel compelled to take pro-environmental actions (Schwartz, 1977).

2-New Ecological Paradigm (NEP): The worldview acknowledges the realization that humans are merely one species within the environment and are heavily reliant on it. Moreover, it highlights that many human activities have significant detrimental effects on the environment (Dunlap & Van Liere, 1978).

The Value Belief Norm Theory

Last but not least, one of the widely applied theoretical frameworks for sustainable consumption, alongside other pro-environmental behaviors, is the Value-Belief-Norm (VBN) Theory of environmentalism (Stern, 2000). Prior to the development of the

VBN theory, Guagnano et al. (1995) proposed the Attitude-Behavior-Context (ABC) model to explain pro-environmental behaviors in a more limited scope compared to the VBN model. The ABC model suggested that environmentally significant behavior is influenced by attitudinal and contextual factors. However, even individuals with pro-environmental attitudes may face obstacles such as financial constraints and peer influence, which can hinder the enactment of pro-environmental behaviors. By recognizing the impact of external factors on the relationship between attitudes and behavior, the ABC model shed light on the complexities behind the discrepancy between favorable attitudes and actual behaviors (Guagnano et al., 1995). Building upon the ABC model, Stern et al. (1999) developed the VBN model, which takes a broader perspective on pro-environmental behavior by incorporating additional factors and integrating various theories. The VBN model incorporates the Norm-Activation Theory of Altruism (Schwartz, 1977), the New Environmental Paradigm (NEP) (Dunlap & Van Liere, 1978), and the Theory of Basic Values (TBV) (Schwartz, 1992).

The finalized VBN model (Stern, 2000) argues that specific values influence individuals' pro-environmental beliefs, which, in turn, shape personal pro-environmental norms, ultimately resulting in diverse pro-environmental behaviors (see Figure 2.4). These values, adapted from the TBV (see Section 2.3.1), are categorized as biospheric values, altruistic values, and egoistic values. Biospheric values entail a commitment to the biosphere and concern for its welfare. Altruistic values, on the other hand, emphasize the interdependence of society and embrace a moral stance that involves helping others without expecting personal gain. Conversely, egoistic values contrast with the aforementioned values as they prioritize individualism and disregard the environment and others. These individual values form the basis of the New Environmental Paradigm (NEP), which encompasses an individual's recognition of their role in and dependence on the environment (Dunlap & Van Liere, 1978). This overall environmental orientation leads to an awareness of the consequences. When individuals become aware of the negative impacts, whether personal or collective, on the environment, it shapes their belief in their ability to mitigate threats. The need for

responsibility towards protecting or avoiding harm to the environment gives rise to a personal norm, which entails an obligation to engage in pro-environmental actions. This sense of commitment manifests in various behavioral expressions. Firstly, pro-environmental activism involves actively advocating for the welfare of the environment and challenging those who do not prioritize environmental concerns. Secondly, the non-activist public sphere of environmentalism (environmental citizenship) refers to individuals who prioritize environmental knowledge over personal environmental concern. Another pro-environmental behavior that emerges from the personal norm is pro-environmental behavior within organizations. Individuals in this category wholeheartedly support government-led environmental campaigns or other pro-environmental initiatives undertaken by organizations. Lastly, private sphere pro-environmental behavior entails individual-level actions and conscientiousness regarding consumption and conservation within a familial context (Stern, 2000; Stern et al., 1999). The VBN theory serves as a conceptual framework used by many researchers to analyze SCAs, SCBs, and various other pro-environmental behaviors (Dursun et al., 2017; Landon et al., 2018; Lind et al., 2015; Liobikiene & Poskus, 2019; Oreg & Katz-Gerro, 2006).

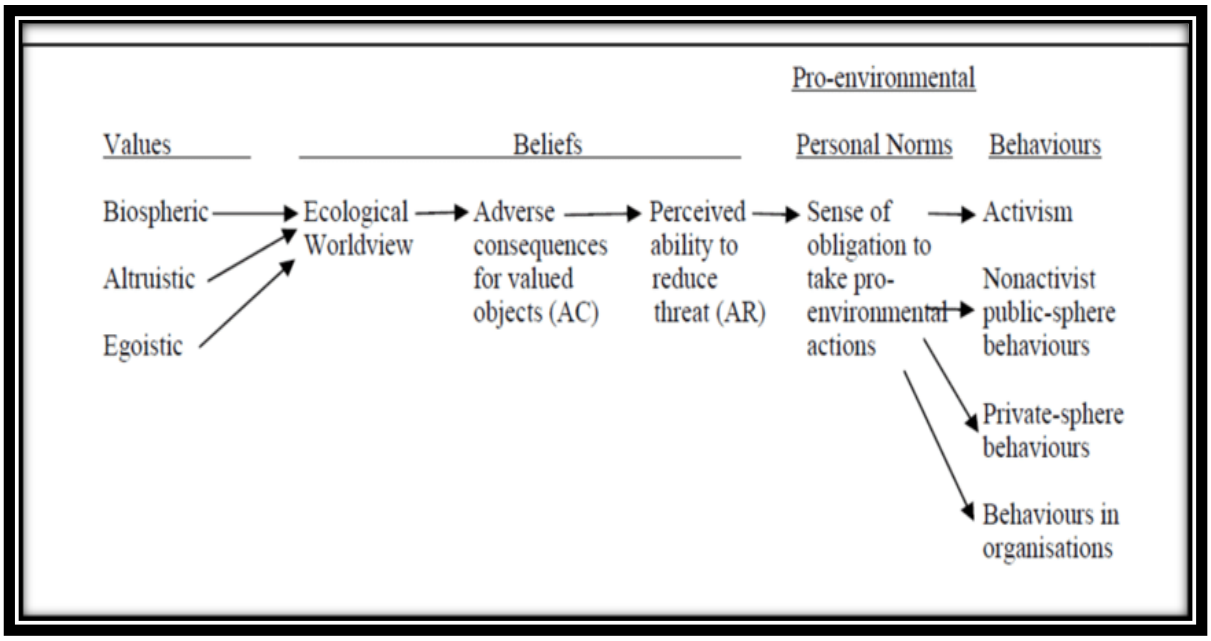

Figure 2. 4. Schematic Representation of Value-Belief-Norm Theory of Environmentalism (Stern, 2000).

Upon reviewing the prominent theories and frameworks, it becomes evident that values play a crucial role in the process of sustainable consumption. Fishbein and Ajzen (1975) argued that the formation of attitudes is contingent upon values. Terlau and Hirsch (2015) highlighted the significance of personal values in decision-making related to sustainable consumption. Stern (2000) further emphasized that values initiate the entire pro-environmental behavior process and contribute to the development of environmental beliefs. Therefore, the following section will examine the influence of values on SCAs and SCBs.

2.3 The Significance of Values on SCAs and SCBs

2.3.1 Values' Relation to SCAs and SCBs

The previous section of the literature review defined and conceptualized the sustainable consumption process, emphasizing that values play a pivotal role in shaping SCAs and subsequent SCBs. Scholarly sources have consistently highlighted the significance of values as guiding principles in human behavior (Rohan, 2000; Rokeach, 1973) and as influential factors in the formation of attitudes (Thogersen & Grunert-Beckmann, 1997). Values, at their core, represent broad and desirable objectives that inspire individuals' actions and serve as fundamental elements in their lives. Furthermore, values have a lasting impact on individuals' choices and behaviors across different contexts and over time (Parsons, 1951; Sagiv et al., 2017).

The Theory of Basic Human Values

Schwartz's (1992) Basic Human Values (BHV) Theory is a prominent framework widely utilized in the fields of psychology and consumer behavior research to explore individual human values (Knafo et al., 2011; Rohan, 2000). This theory posits the existence of 10 fundamental value types (Schwartz & Boehnke, 2004):

Universalism: Respecting and acknowledging the well-being of the society and the environment (pro-environmentalism, equality, justice).

Benevolence: Preserving and enhancing the well-being of individuals who have regular interpersonal connections (loyalty, responsibility, honesty).

Conformity: Restriction of behaviors, tendencies, and emotions that are likely to offend or hurt others and contradict societal standards or norms (obedience, discipline, politeness).

Tradition: Appreciation, dedication, and approval of culture and traditions or religious practices (moderation, respect, devotion).

Security: Protection, coherence, and integrity in society and one's own self (social order, national and family security).

Power: Authority or dominance over individuals and resources, seeking social status and reputation (wealth, preservation of public self, social power).

Achievement: Personal accomplishment that is achieved through exhibiting competency in accordance with societal expectations (success, capability, influence).

Hedonism: Self-satisfaction or sensual fulfillment (self-indulgence, pleasure, enjoyment).

Stimulation: Seeking surprises, thrills and novelties in life (Bravery, excitement, variation in life).

Self-direction: Individual perception and activity with regards to governing one's life (curiosity, creativity, independence).

Moreover, these ten values are organized within a two-dimensional circular framework, guided by two axes: self-transcendence versus self-enhancement, and openness to change versus conservation. The first dimension explores values that are other-oriented (benevolence, universalism) in contrast to those that are self-oriented (hedonism, power, accomplishment). The second dimension emphasizes values that prioritize change (stimulation, self-direction) as opposed to those that prioritize maintaining the status quo (conformity, tradition, security) (refer to Figure 2.5).

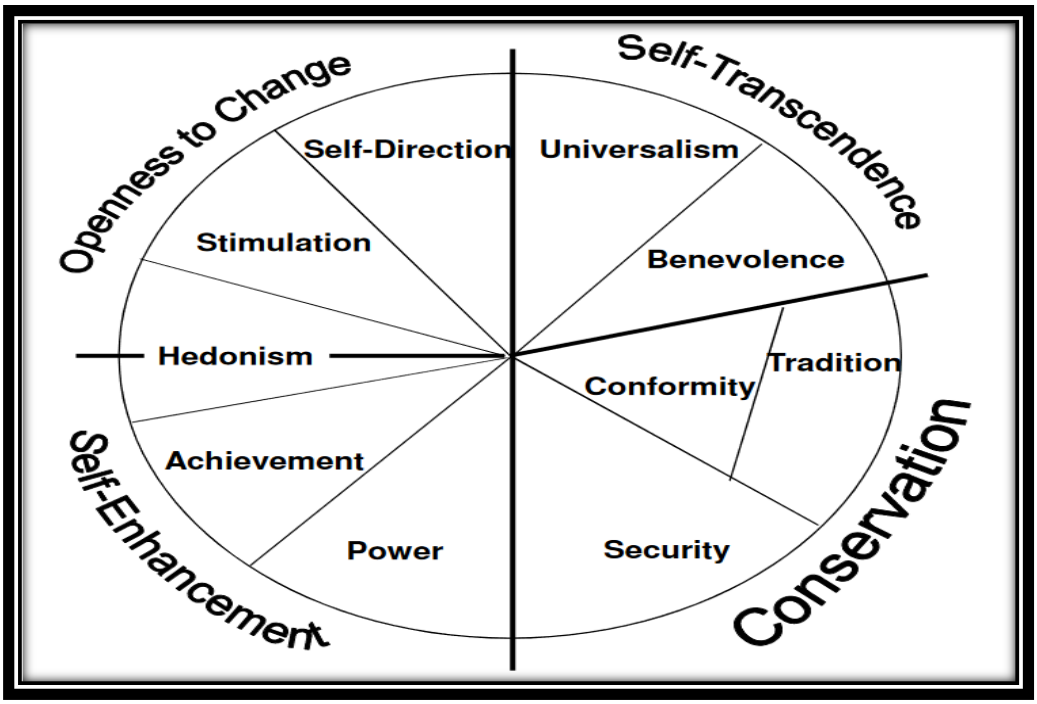

Figure 2. 5. Theoretical model of Basic Values (Schwartz, 2012).

The BHV theory has been extensively applied to comprehend the underlying values driving SCBs. Previous literature highlights that self-transcendence values, specifically universalism and benevolence, hold greater significance as indicators of SCBs compared to self-enhancement values such as power, hedonism, and achievement (Dietz et al., 1998; Stern et al., 1995). Correspondingly, Sharma and Jha (2017) demonstrated the substantial influence of self-transcendence values (universalism and benevolence) on SCBs. Thogersen and Ölander (2002) also found that the value of universalism emerges as one of the most significant predictors of sustainable consumption. Additionally, Karp (1996) concluded that self-transcendence values exhibit a positive association with pro-environmental behavior. Conversely, self-enhancement values have shown to have an insignificant impact on SCBs (Urien & Kilbourne, 2010). Moreover, self-enhancement values have been found to exhibit a negative relationship with socially responsible behavior (Ali & Mandurah, 2016; Holmes et al., 2002).

Categorization of BHV Theory as Altruism and Materialism Value Orientations

The value of self-transcendence is related to an altruistic value orientation, which is positively associated with consumers' concern for the welfare of others and the well-being of the environment. In contrast, self-enhancement values are characterized as an egoistic value orientation that encourages individuals to pursue self-interest, even at the expense of others' welfare (Crilly et al., 2008; Anuar et al., 2020; Schwartz, 1992). It has been found that altruistic value orientation has a more significant influence on SCAs compared to egoistic value orientation (Prakash et al., 2019). Therefore, it is expected that individuals who possess an altruistic value orientation, as opposed to an egoistic value orientation, are more likely to engage in SCBs.

The egoistic value orientation is closely associated with self-enhancement values, as mentioned earlier. This particular value orientation can also be connected to another value system, namely materialism. This connection arises from materialism's strong association with self-enhancement values and its negative correlation with self-transcendence values (Kasser, 2016; Schrum et al., 2013). Literature has pointed out that materialism leads individuals to prioritize egoism over altruism (Yankelovich, 1981). Furthermore, supporting evidence, such as the opposition between materialism and collective-oriented values (Burroughs & Rindfleisch, 2002) and the underlying motivation of self-enhancement in materialistic behaviors, reinforces the aforementioned assertion.

Consequently, the value orientations that significantly affect sustainable consumption can be categorized into two components. Firstly, altruism, which is already regarded as a value orientation representing self-transcendence values (Schwartz, 1992). Secondly, materialism, which mirrors self-enhancement values (Thyroff & Kilbourne, 2018), must be analyzed extensively in this section to gain a comprehensive understanding of what truly facilitates and hinders SCAs and SCBs.

2.3.2 Altruism Value on SCAs and SCBs

Finding a Multidisciplinary Definition for Altruism

Defining altruism is not an easy task, as it has been conceptualized from various perspectives in the realm of social sciences. However, developing a comprehensive definition that can be used interchangeably would not pose a problem if the definitions from these different areas are analyzed and, eventually, if the concept can be generalized in a well-organized manner. Consequently, below are different descriptions of altruism from various social sciences.

Evolutionary Biology: A certain behavior of benefactor that increases the fitness of the recipient with the expense of the benefactor (Sober & Wilson, 1998).

Psychology: An act from an individual that favors the interests of the other party in opposition to his/her own interests (Sesardic, 1999).

Environmental Economics: The genuine altruism is any behavior that is enacted for the utility of others without gaining any personal reward or interest (Johansson-Stenman, 1998).

Philosophy: The effective altruism stands for using reasoning and logic to determine how to help others as much as possible, then behaving accordingly (MackAskill, 2017).

After examining the different representations of altruism from various fields, it becomes apparent that the common theme is helping others without expecting anything in return. However, there is still one issue that needs to be addressed before creating an interconnected definition for altruism: determining its antecedent factors. It has been noted that compassion and empathy are the two primary elements that lead to altruistic behavior, differentiating it from prosocial behavior (Büssing et al., 2013). Altruism is formed by the prosocial orientation but surpasses it because prosocial behavior involves helping others in need without directly empathizing with them, and there may be some desired interest for the benefactor in the end, unlike altruistic behavior

(Bierhoff, 2002). Culture and religion also play significant roles in the development of altruistic behavior, as they encourage individuals with certain symbols and aim to establish an altruistic moral system (Morrison & Severino, 2007). As previously stated, Schwartz's (1992) theory of Basic Human Values (BHV) is arguably the most commonly used framework for understanding the underlying factors of a particular behavior. In line with this, Gandullia et al. (2021) conducted an experiment to uncover the set of values underlying altruistic behaviors, utilizing the theory of BHV. They demonstrated that self-transcendence values (caring and having an interest in the well-being of others) and conservation values (respecting societal norms and beliefs and refraining from actions that may harm others) are closely linked to altruistic behavior. Consequently, it could be stated that people who exhibit altruistic behaviors share the same value system. Before examining the relationship of altruism with various dependent variables, it is crucial to provide a final definition of altruism based on the discussion thus far.

Altruism: A value system that motivates an individual to enact a pro-social behavior that is originated with empathy and compassion without foreseeing any interest in return.

After shedding light on the definitions of altruism from different disciplines, elucidating its underlying factors, and formulating a general definition that can be interchangeably applicable, the next step is to highlight altruism's relationship with specific dependent variables in the literature.

Altruism on Various Dependent Variables

It is apparent that altruism is strongly associated with increased helping behavior. The empathy-altruism model explains that when an individual is predominantly motivated by altruism rather than egoism (enacting behavior to alleviate personal distress), their immediate emotional reaction upon witnessing someone in need is empathic concern, such as compassion. This emotional response results in increased

helping behavior (Batson & Coke, 1981; Toi & Batson, 1982). In contrast, individuals driven by egoistic motivations may still help others to alleviate personal distress, but they tend to be more indifferent toward those in need or more likely to prioritize their own escape from the situation if it is relatively easy (Schroeder et al., 1988). Therefore, it can be argued that when altruistic motivation is outweighed by egoistic motivation, individuals engage in fewer selfless acts. Previous literature demonstrates that altruism acts as a hindering factor to selfishness, decreasing cooperation with others (Axelrod & Hamilton, 1975; Trivers, 1971). Another finding suggests a strong association between altruism and collectivism, as altruistic individuals strive to strengthen their social ties (Finkelstein, 2010). Munroe (2017) also highlights a positive correlation between the degree of collectivism and the degree of altruism within a community. Furthermore, altruism forms a strong positive relationship with happiness. High levels of altruism are associated with increased empathy, a heightened sense of social responsibility, and strong interdependency, all of which contribute to enhanced well-being (Meyzari Ali & Dasht Bozorgi, 2016).

Altruistic Consumer Behavior

Another area where research on altruism extensively expands is sustainable consumer behavior. However, before delving into the relationship between altruism and environmental sustainability, it is crucial to establish a general understanding of the altruistic consumer. Grand et al (2021) argue that an altruistic consumer takes action in the market by considering three different motivators which are sacrifice, self-identity, and status. If a consumer is motivated by these three factors, they are willing to sacrifice their money by paying a premium price for fairtrade[12] labeled products and eager the express their ethical self-interest (rather than their material self-interests) and

[12] Fairtrade certification is a system that aims guarantee that certain requirements are satisfied during the production and the delivery of the goods, Fairtrade can translate as premium and ethically manufactured goods for consumers while providing a safer and just working conditions for employees and farmers (Bernard-Rau & Scherring, 2022).

they desire to be appreciated among peers because of their ethical purchases (Grand et al., 2021).

Moreover, Hopkins and Powers (2015) conducted a comprehensive review of the existing theoretical frameworks utilized in various disciplines and developed a highly useful and applicable model for understanding altruistic consumer behavior (refer to Figure 2.6).

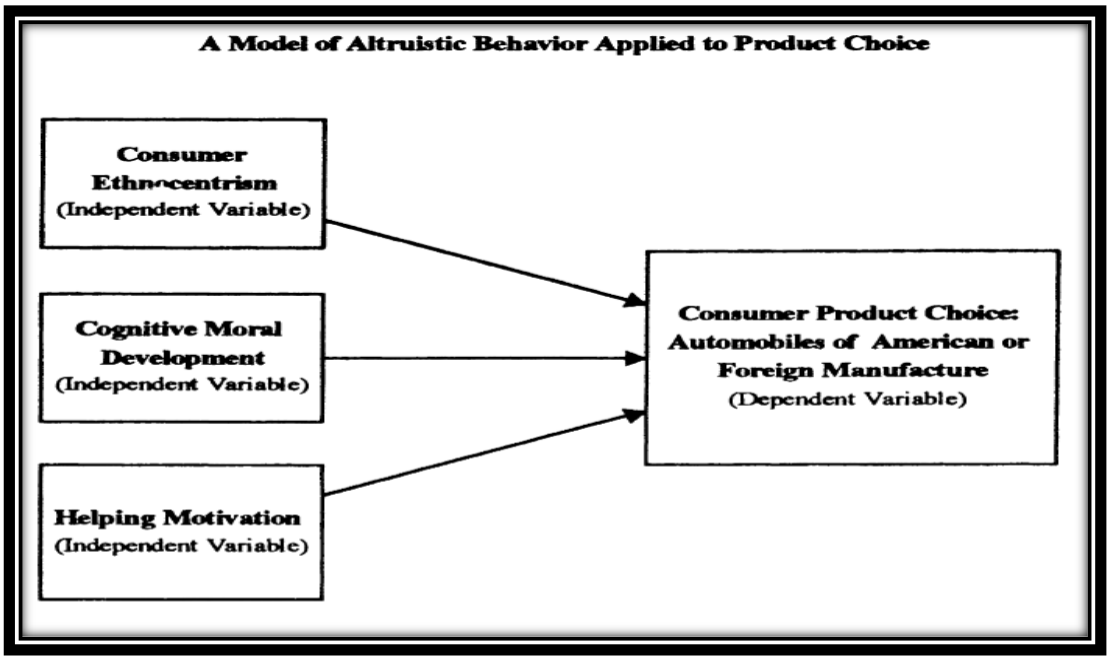

Figure 2. 6. A Model of Altruistic Behavior Applied to Product Choice (Hopkins & Powers, 2015).

The model elucidates that altruistic consumer behavior comprises cultural, cognitive, and behavioral components (Bar-Tal, 1976). The cultural component, known as consumer ethnocentrism, pertains to the emphasis placed on purchasing domestic products as a means to contribute to the economy and support domestic workers. The cognitive aspect, referred to as cognitive moral development, urges individuals to be

aware of their moral obligations and social norms, ultimately transcending them to engage in behaviors that are devoid of ego-centric inclinations. Finally, the behavioral determinant of altruistic consumer behavior involves considering pro-social motives before engaging in a purchase behavior (Powers & Hopkins, 2006).

Altruism and Sustainability

Upon reviewing the literature on the motivation and behavior of altruistic consumers, it becomes apparent that the value placed on helping others and acting without egoistic motives may also extend to the relationship with sustainability. Existing literature consistently indicates a significant positive correlation between altruism and pro-environmental behaviors (de Groot & Thogersen, 2018; Dietz et al., 2002; Loureiro & Lima, 2019; Xu et al., 2021; Zhang et al., 2014). Based on these findings, it is expected that individuals with high levels of altruism will exhibit positive environmental behaviors that align with their consumption practices as well. Bautista et al. (2020) further observed that altruism acts as a mediating factor between the intention to purchase green products and attitudes toward consuming them.Prakash et al. (2019) highlighted that if altruist values outweigh egoistic values, peoples' intention to buy eco-friendly packaged[13] products increases. Wang et al (2020) demonstrate there is a positive relationship between altruistic values and attitudes towards green hotel[14] selection. Kim et al (2016) contributed to the relevant literature by showing that altruism is a significant factor and forms a positive relationship with the sustainable fashion consumption behaviors. Research from Yarimoglu and Binboga (2018) also

[13] Packaging enhancements that are done in a sustainable manner, using less materials in the production process, enhancing the recyclability and designing the package that would produce more recyclable content (Pakash & Pathak, 2017).

[14] A green hotel differs from a conventional hotel with regards to engaging in eco-friendly activities to protect the environment and save down on operating expenses. These activities include conserving energy and water, making eco-friendly purchasing decisions, and cutting back on emissions and waste disposal (Barber, 2012).

shows that altruism is a significant antecedent for the ecologically conscious consumption behaviors and intention for green purchase. Overall, after reviewing the previous literature it can be posited that altruism value is a strong determinant for exerting sustainable consumption attitudes and behaviors. Next section will present a barrier for sustainable consumption which is materialism, and the relevant findings will be shared to demonstrate how materialism affects SCAs and SCBs.

2.3.3 Materialism Value on SCAs and SCBs

Introduction to Materialism

Materialism is not only a concept embedded in popular culture and widely discussed by the general public but also one of the central constructs under investigation in consumer behavior and environmental psychology (Schrum et al., 2022). Numerous scholars and scientists have demonstrated that materialism serves as a predictor of various negative purchasing behaviors. Pradhan et al. (2018) found that materialism increases the inclination toward impulse buying, while Bhatia (2019) observed a positive impact of materialism on e-compulsive buying behavior. Additionally, Rose (2007) associated materialism with the development of addictive buying behaviors. Individuals with a materialistic orientation are prone to pursuing expensive material possessions and placing a higher value on money compared to others. This mindset stems from the belief that such a lifestyle will lead to greater well-being and social status. However, it has been revealed that high materialism is negatively associated with all aspects of well-being, including personal, social, and environmental well-being (Dittmar & Isham, 2022). This section of the literature review aims to elucidate the various definitions of materialism provided by different scholars, outline the behavior of materialistic consumers, and explore its relationship with SCAs and SCBs.

Representation of Materialism in the Literature

Research on materialism has been extended by deeming the construct as a value and a personality trait. Richins and Dawson, (1992) defined materialism as a consumer value that revolves around three main themes:

Centrality: Making the acquisition of possessions is the ultimate life goal.

Happiness: Believing that happiness can only emerge with embodying materialistic value orientation.

Success: The idea of having high status and reputation over society can be achieved through the accumulation of possessions.

Kasser (2016) also characterizes materialism as a set of values and objectives held by individuals who seek affluence, public recognition, social status, and material possessions. It has been observed that high materialism is associated with a diminished concern for the well-being of others and hinders personal growth. Conversely, Belk (1985) defines materialism as a personality trait consisting of four subscales. These include possessiveness, which refers to the eagerness to exert power and control over one's acquired goods; nongenerosity, which signifies displeasure and dissatisfaction with sharing one's possessions; envy, which represents a distaste for witnessing others' superiority in terms of status, happiness, or success; and preservation, which denotes a willingness to document and preserve events and experiences in a material form.

The Materialistic Consumer

Furthermore, scholars have expanded the literature by examining the behavior of materialistic consumers. Wong (1997) emphasizes that materialistic consumers are primarily concerned with their public self, which relates to how they are perceived by others, rather than their private self, which pertains to self-evaluation and the pursuit of personal goals and meanings. This implies that materialistic consumers place greater importance on the public symbolism of their possessions, believing that these

possessions are the primary indicators of status and prestige in society. Additionally, materialistic consumers use the acquisition of material goods as a means to shape and cultivate their self-identity in the public sphere (Bagozzi et al., 2020). Individuals who score low on psychological factors such as belongingness, self-esteem, and power may experience "self-discrepancies," which refer to the disparities between their actual and ideal selves (Higgins, 1987). This discrepancy leads to feelings of dissatisfaction and discomfort. In order to bridge this gap and enhance certain psychological factors that impact their well-being (such as feelings of power or self-esteem), materialistic consumers tend to engage in "compensatory consumption," which aims to alleviate these self-discrepancies and is positively correlated with materialism (Rucker & Galinsky, 2013; Carr & Vignoles, 2011). This suggests that materialistic consumers may compensate for their psychological needs by engaging in materialistic behaviors (Shrum et al., 2013). Moreover, materialistic consumers are associated with having fewer social relationships (Kasser, 2016), experiencing a lack of belongingness and loneliness (Loh et al., 2021; Pieters, 2013), higher levels of social anxiety and individualism (Wong, 1997), lower propensity for helping behaviors (Kasser, 2005), and unethical consumer practices (Lu & Lu, 2010).

After thoroughly examining the extensive array of consequences of materialism on consumers, there remains one crucial area that requires further investigation: the effects of materialism on sustainability.

Materialism on SCAs and SCBs

As mentioned previously, materialism has been found to be inversely associated with collective-oriented values (as discussed in Section 2.3.1) and is linked to encompassing self-enhancement values such as achievement and power, as measured by the Schwartz Value Inventory (Burroughs & Rindfleisch, 2002). On the other hand, altruism has been associated with the self-transcendence dimension of the Schwartz Value Inventory (Gandullia et al., 2021), which has also shown a positive relationship with pro-environmental behaviors. This opposition between materialism and altruism

in terms of their value orientations suggests that the relationship between materialism and pro-environmental behaviors is likely to be negative.

The literature presents a consistent view of the relationship between materialism and sustainability as two opposing concepts. Several studies have explored this issue and consistently found negative associations between materialism and various aspects of environmentalism. For instance, materialism has been found to be negatively related to environmentalism itself (Banarjee & McKeage, 1994), environmental beliefs, and environmental concerns (Gao & Liu, 2014; Kilbourne & Pickett, 2008), as well as environmental ethics (Bergman et al., 2014). Moreover, materialistic individuals are less likely to believe that they need to alter their actions or motivations to protect the environment and are more inclined to engage in environmentally harmful behaviors, as materialism is negatively associated with pro-environmental attitudes and behaviors (Hurst et al., 2013). This negative relationship between materialism and sustainability is also evident in the context of SCAs and SCBs. Suarez et al. (2020) identified a negative relationship between materialism and all three pillars of consciousness for sustainable consumption: social, environmental, and economic pillars. Malodia and Bhatt (2019) demonstrated that materialism acts as a significant barrier to embracing sustainable consumption behaviors. Mai (2019) found that all three components of materialism (happiness, success, and centrality) are negatively related to green purchase attitude and intention. Furthermore, Hultman et al. (2015) highlighted that materialistic consumers are less willing to pay a premium for green products because they are not primarily attracted to them.

Before concluding the this section of the literature review, it is essential to address a crucial question: Can values change or be influenced by external factors? This question will be explored in the upcoming section by examining relevant studies and papers.

2.3.4 The Value Change Conundrum

The research on this conundrum indicates that values can indeed change over time, except for the core values associated with human rights (i.e., the right to live, equality, and freedom). Changes in values occur through certain processes, such as the acquisition of new knowledge, changes in societal norms, and technological advancements (Calman, 2003). Moreover, it has also been highlighted that certain values of individuals can be made more salient or diminished through external exposures. The literature on this subject matter demonstrates that 'priming' can influence values and subsequently impact behaviors. Price (2016) demonstrates that priming two opposing personal values has contrasting effects on resulting behaviors. In the study, participants primed with self-transcendence values exhibited more emotional empathy and less burnout compared to the control group, whereas participants primed with self-enhancement values demonstrated lower empathy and higher burnout than the control group. One of the key findings of this research indicates that priming can enhance individuals' inclination and motivation towards behaviors that align with the principles associated with the primed values. Similarly, Maio et al. (2009) highlighted that priming a specific set of values from Schwartz's BHV (1992) increases the likelihood of engaging in behaviors that align with those primed values, while reducing behaviors associated with conflicting values from the values inventory.

The aforementioned findings regarding the influence of priming on values raise the question of whether priming can also impact individuals' materialism and altruism values, subsequently affecting their subsequent SCAs and SCBs. To address this question, a brief analysis of priming theory will be conducted, followed by an exploration of the concept of 'money priming.' In the following sections, these associations will be thoroughly examined.

2.4 Money Priming Phenomenon

2.4.1 Priming Theory

This section will discuss priming theory, beginning with a conceptualization of the human memory system as it relates to priming. Subsequently, the concept of priming will be explained, along with the introduction of various methods and techniques used in priming studies. Several notable experiments will then be presented to illustrate the effects of priming on behavior. Finally, the concept of money priming will be introduced, and the section will conclude by highlighting the effects of money priming on specific dependent variables.

The Human Memory System

Initially, memory was thought to operate as a singular system. However, through the exploration of various scholars and researchers, it was discovered that memory consists of multiple subsystems with distinct operating methods. The initial set of experiments proposed the existence of three memory subsystems: episodic memory, semantic memory, and procedural memory. Episodic memory is responsible for recognizing personal and individual events, semantic memory involves the acquisition and retrieval of knowledge, while procedural memory is associated with changes in behavior based on increased skill and exposure to stimuli. Procedural memory primarily pertains to behavior, whereas semantic and episodic memories primarily relate to cognition. Subsequent research revealed the presence of an additional memory subsystem that shares characteristics of both semantic and procedural memory. This subsystem, known as priming, involves the influence of past experiences on both behavior and cognition domains (Tulving & Schacter, 1990). Consequently, these memory subsystems have been categorized into two main types, namely explicit memories and implicit memories (as illustrated in Figure 2.7). Explicit memory (comprising semantic memory and episodic memory) is associated with conscious

recollection and deliberate activities, involving the accumulation of thoughts and memories through personal experiences and factual knowledge. On the other hand, implicit memory (including priming and procedural memory) is related to behavioral changes resulting from past experiences that are not consciously recollected or directly associated with specific events (Schacter, 1992).

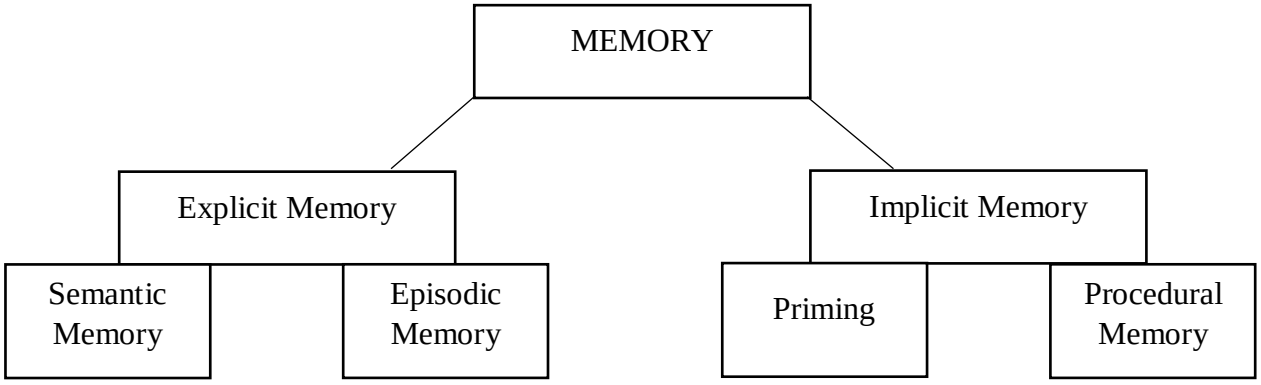

Figure 2. 7. The Human Memory Types: Adapted from Squire (2004), Squire and Zola-Morgan (1991) and, Tulving and Schacter (1990).

Definition of Priming

Priming refers to a non-conscious influence on subsequent behavior that is triggered by a previous exposure to stimuli, activating implicit memory (Schacter & Buckner, 1998). It is important to note that priming shares similarities with procedural memory, as it enhances perceptual abilities, and with semantic memory, as it involves cognitive representations of the world and manifests itself through cognition rather than overt behavior (Tulving & Schacter, 1990). Specifically, priming occurs when a specific stimulus renders certain values, attitudes, or motivations derived from personal experiences and collective knowledge more salient or diminished, consequently leading to a change in subsequent behavior (refer to Figure 2.8) (Chartrand & Jeferris, 2004).

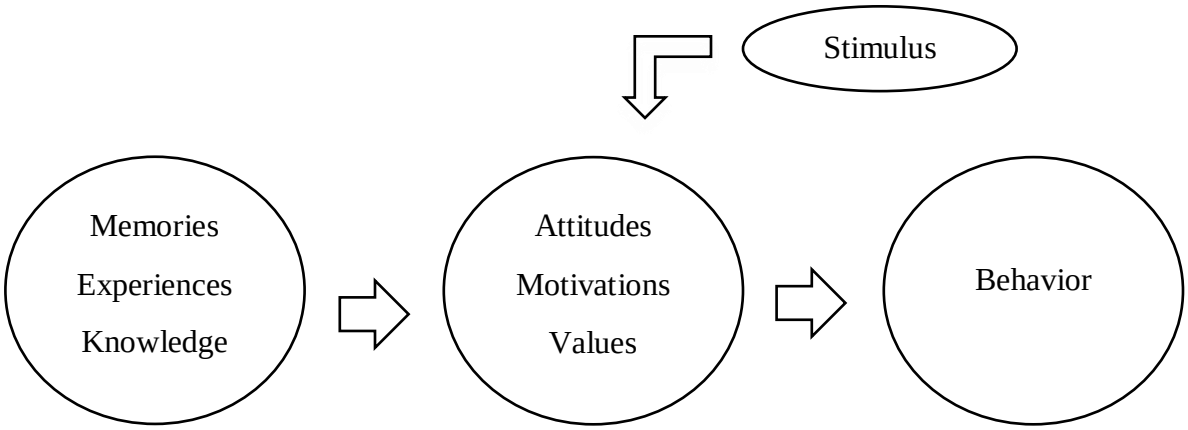

Figure 2. 8. The Priming Framework: Adapted from Chartrand and Jefferis (2004).

The interactions individuals have within their environment briefly activate mentally represented concepts. These concepts can encompass symbols, attitudes, stereotypes, aspirations, moods, or emotions, and they become more accessible once activated. These activated concepts are referred to as primed, meaning they are more likely to influence one's subsequent thoughts, feelings, judgments, and behaviors. Priming can also be understood as an experimental approach aimed at simulating the activation of concepts that occurs in real-world situations (Bermeitinger, 2016). Therefore, research on priming suggests that individuals' values, attitudes, and subsequent behaviors can be influenced by implicit exposure to various stimuli.

Priming Experimentation, Methods and Techniques

Priming literature is enriched by elucidating the effects of different stimuli on subsequent behaviors. Prior to delving into notable experiments on the subject, it is illuminating to comprehend the process of priming within an experimental context. The priming experiment typically comprises two phases. In the initial phase, participants are exposed to a specific stimulus, which is incorporated into tasks such as phrase unscrambling, word association, or paragraph reading. Upon completing one or sometimes multiple of these manipulation methods, the participants are presented with

test items that assess the influence of priming on specific future behaviors in the second phase, which may be administered immediately or after a certain period has elapsed (Bermeitinger, 2016; Squire, 1992).

Two primary methods are employed in various priming experiments. The first method, known as supraliminal priming, involves concealing the intended concept to be primed within tasks such as word scrambling or paragraph writing. Despite participants being unaware of the prime, the specific stimulus remains evident in the tasks used (Stajkovic et al., 2022). The second method, referred to as subliminal priming, entails priming participants with stimuli that are not consciously perceptible (Elgendi, 2018). Whether the employed method is supraliminal or subliminal, the objective of priming experiments is to activate implicit memory, distinguishing them from traditional recognition and recall techniques associated with explicit memory. Consequently, during the encoding phase (when participants are primed with a specific stimulus), it is crucial to avoid overexposing them to excessive information and elaboration to prevent reliance on explicit memory, which could compromise the priming experiment (Schacter & Buckner, 1998). Furthermore, priming experiments typically employ two main response techniques: perceptual responses and behavioral responses. The perceptual response technique utilizes scales to measure specific constructs, such as willingness to engage in an action, attitudes, or behaviors. On the other hand, the behavioral response technique aims to measure real-life behaviors rather than relying on participant-assigned ratings on a scale (e.g., number of objects collected, speed, puzzle-solving) (Stajkovic et al., 2022).

By exploring the theoretical foundations of the aforementioned priming methods and techniques, numerous scholars have contributed to the enrichment of priming literature by demonstrating how specific stimuli influence subsequent behaviors. Bargh et al. (1996) revealed that priming individuals with a word scrambling task associated with old age led to slower walking speeds when leaving the experiment. Papies and Hamstra (2010) primed individuals with dieting concepts and observed that people

exhibited restraint and reduced their eating behavior when presented with the opportunity to try free meat snacks in a local store. Shariff et al. (2007) aimed to investigate how priming religion could alter individuals' behaviors by implicitly activating the concept of God, and they found that people became more generous and prosocial as a result. Zemack-Rugar and Bettman (2007) primed individuals with guilt-related and sad emotion-related adjectives and discovered that those in the guilt group exhibited more helping behavior and demonstrated less indulgence compared to the sadness group. Hundhammer and Mussweiler (2012) conducted a study where both genders were primed with verbal and visual cues that activated gender stereotypes, resulting in women displaying greater submissiveness and men showing increased assertiveness. Bimonte et al. (2018) demonstrated that priming individuals with nature and sustainability-related stimuli heightened pro-environmental attitudes among participants. Consequently, various stimuli or primes have diverse effects on individuals' behaviors.

In the following section, the focus will shift to money priming, which is arguably one of the most prevalent stimuli encountered in everyday human life. The subsequent behaviors resulting from this priming process will be explored and explained.

2.4.2 Introduction to Money Priming

Whether as a concrete material, notation, symbols, or images, money completely surrounds human beings in the current age. Even the idea of money has significant effects on human behavior, and this phenomenon is being analyzed under the term "money priming". Although the effects of money on human psychology and certain behaviors have been investigated in the literature before (Doyle, 1992; Goldberg & Lewis, 2000; Argyle & Furnham, 1998), the first study to demonstrate how merely activating the idea of money has related psychological consequences under the term "money priming" was conducted by Vohs et al. (2006). The money priming process

occurs through the presentation of a stimulus that induces a mental representation of money outside of consciousness, ultimately triggering behaviors associated with that representation. According to the findings of nine diverse experiments, money priming leads to a self-sufficiency orientation, resulting in self-efficacy, egoistic actions, a desire to create distance between oneself and others, a lack of willingness to help others, and reluctance to seek support from others (Vohs et al., 2006).Similar to the methods used in other priming experiments, typical money priming experiments employ various techniques to prime participants. These techniques include a scrambled sentence task, where participants are required to form meaningful sentences from jumbled word groups that consist of money-related concepts (Jiang et al., 2014), reading a paragraph or viewing a visual that activates the idea of money (Vohs et al., 2006), engaging participants in paragraph writing and prompting them to contemplate money-related matters (Caruso et al., 2017), or even allowing participants to physically handle money (Gasirowska et al., 2012).

Through the utilization of various priming methods and behavioral response techniques, along with different variations of priming, the literature on money priming has been extensively explored by numerous academics. This body of research aims to uncover the consequences associated with the activation of the concept of money. In order to elucidate these indicated consequences, the existing literature has been thoroughly examined, and the effects of money priming on distinct dependent variables will be presented in the following section.

2.4.3 Money Priming on Dependent Variables

Money Priming on Self-sufficiency and Individualism

Vohs et al. (2015) conducted a series of experiments and observed that individuals who were primed with money exhibited a tendency to behave in a more self-sufficient manner. This state of self-sufficiency is characterized by a desire for independence and

a tendency to separate oneself from others while performing tasks or making decisions. Individuals in this state are reluctant to involve others in their activities (Vohs et al., 2008). The self-sufficiency hypothesis proposed by Vohs et al. (2006) has been replicated multiple times, consistently highlighting that money priming leads people to adopt a more individualistic approach, preferring solitude and placing greater focus on their own needs (Boucher & Kofos, 2012; Mok & De Cremer, 2018; Mukherjee et al., 2013; Schuler & Wanke, 2016). Therefore, the notion emerges that the self-sufficiency state activated by money priming amplifies the salience of individualism values. According to Hofstede (2011), individualism, as opposed to collectivism, is a societal characteristic that reflects the extent to which individuals in a society are integrated into groups. Individualistic individuals place greater importance on task completion rather than forming relationships with others and support the notion that everyone should take care of themselves independently (Hofstede, 2011). Previous literature also indicates that money priming increases individualism while decreasing collectivism (Broda, 2019; Savani et al., 2016; Vohs et al., 2006).

Money Priming on Selfishness

Selfishness is defined as an excessive attention given to one's own benefit by disregarding the welfare of others (Raine & Uh, 2018). The construct is mostly associated with a lack of altruism, being ungenerous, and not desiring to cooperate with others (Carlson et al., 2016; Clark, 2011). Wagner (1995) also characterizes selfishness as the desire to pursue personal benefits and not assessing importance towards group activities. Moreover, it has been stated that the effects of money priming lessen cooperation attitudes (Pfeffer & Devoe, 2009), mitigate generosity (Gasiorowska & Helka, 2012), and increase the desire to be self-oriented (Reutner & Wanke, 2013). The extant literature highlights that the effects of money priming are associated with selfish behaviors (Ekici et al., 2019; Gasiorowska & Helka, 2016; Jiang et al., 2014; Kouchaki et al., 2013). The reason for this relationship might stem from the self-sufficiency state that money priming brings out. When people are primed with money, they tend to feel

more self-sufficient and, as a result, focus more on themselves in contrast to other individuals (Vohs, 2006). Former research also shows the consequence of money priming makes individuals feel uninterested in social interrelations (Capaldi & Zelenski, 2013) and alleviates their emotional expressions (Jiang et al., 2014), which may further explain their selfish acts toward others.

Money Priming on Helping Behavior

Vohs (2015) underlines that money priming bolsters self-efficacy (Mukherjee et al., 2013) and positively affects feeling strong (Zhou et al., 2009). As a result, individuals who are reminded of money believe that they should survive and strive in life on their own, hence decreasing their willingness to receive help from others. It has also been highlighted that money priming mitigates empathy and makes people less compassionate (Molinsky et al., 2012). Therefore, the outcome of money priming is expected to resonate with a reduced willingness to help other people. In accordance with this conception, the extant literature shows that money priming decreases sensitivity to the needs of other individuals (Gasiorowska et al., 2016), reduces willingness to volunteer (Pfeffer & Devoe, 2009), mitigates charitable giving (Ekici et al., 2018; Roberts & Roberts, 2012), and negatively affects prosocial behavior (Mok & De Cremer, 2016). Thus, it can be stated that reminders of money influence people's helping behavior in a negative manner.

Money Priming On Unethical Behavior

Lastly, the effect of money priming on unethical behavior will be analyzed. Unethical behavior is regarded as behavior that contradicts generally agreed-upon social moral norms (Kish-Gephart et al., 2010). Hirschi (1969) notes that, according to the social bond theory, one of the main antecedent factors that may lead individuals to engage in unethical behaviors is the feeling of disconnection and alienation from society. Previous literature already shows that people who are primed with money feel less social relative to others and even desire to put more physical distance between

themselves and other individuals (Vohs et al., 2006), perceive a larger social distance (Ma et al., 2017), and feel reduced connection with other individuals (Macdonald, 2019). Since the feeling of disconnection from others might lead to unethical behaviors, money priming could also initiate unethical behaviors. As expected, the influence of money priming has been found to attract individuals to engage in unethical behaviors such as cheating (Gino et al., 2014), lying (Kouchaki et al., 2013), and participating in immoral business activities (Macdonald, 2019).

2.5 Conclusion

This literature review was conducted with the aim of examining the sustainable consumption theory and the influence of values, specifically altruism and materialism, SCAs and SCBs, as well as the impact of money priming. The analysis of the literature also provides implications on how to address sustainability issues by identifying the key drivers and barriers of sustainable consumption. By establishing such a comprehensive data collection, this review not only benefits academics but also provides valuable insights for policymakers and marketers in fostering a sustainable future. The literature findings revealed that both materialism and altruism have an impact on SCAs and SCBs. Furthermore, the analysis indicated that the phenomenon of priming can make certain values more salient or diminished, thereby potentially influencing people's behaviors. The extensive examination of the effects of money priming on various dependent variables showed that the behavioral consequences of money priming share similarities with the behaviors of consumers who possess materialistic values. In line with this understanding, it can be inferred that money priming may also diminish the altruistic values of consumers, as the outcomes of money priming directly contradict the behaviors of altruistic individuals. To further explore this assumed relationship and the effects of money priming on SCAs and SCBs, the subsequent section will present conceptual development and the research hypotheses.

CHAPTER 3

CONCEPTUAL DEVELOPMENT AND HYPOTHESES DEVELOPMENT

3.1 Chapter Summary

This section of the thesis presents a conceptual groundwork to provide a rationale for the related hypotheses. In line with the literature review which was provided in the preceding section, this part of the thesis examines the relationship between money priming and sustainable consumption. Firstly, the research gaps and significance of the research will be discussed and respectively conceptual framework will be provided in the next section. The subsequent section will contain the hypotheses development with regard to the relations that will be formed between the constructs. Finally, the conceptual model will be displayed before moving on to the next chapter.

3.2 Research Gaps, Significance of the Research and Conceptual Framework

3.2.1 The Research Gaps, Research Objectives and Contributions to the Literature

The literature currently demonstrates that SCAs and SCBs are associated with various enablers and constraints. The preceding chapter (see Section 2.2.3) presents the noteworthy antecedent factors that affect SCAs and SCBs. Contemporary research on these constructs emphasizes that, while numerous external factors influence SCAs and SCBs, internal factors, particularly individuals' personal values, play a crucial role in these constructs. Altruism and materialism emerge as two prominent values that significantly impact SCAs and SCBs, as indicated by numerous studies in the literature.

After reviewing the literature, it has been observed that despite the existence of numerous constructs related to SCAs and SCBs, there appears to be limited research investigating the relationship between the idea of money and these constructs. Therefore, to explore this relationship, the decision has been made to employ the money priming methodology. Further examination of the literature indicates that money priming has the potential to activate or diminish the influence of certain values and subsequently alter individuals' behaviors. However, the specific value systems influenced by money priming have received limited attention in the literature. Consequently, to determine whether money priming affects SCAs and SCBs and with the objective of illustrating the effects of money priming on altruism and materialism, a conceptual model has been developed and hypotheses have been formulated. The research findings will contribute to the existing literature by expanding our understanding of the impact of money priming on consumers and the factors that either facilitate or hinder sustainable consumption. Moreover, this research will serve as the foundation for the first empirical examination of the influence of money priming on altruism and materialism.

3.2.2 Conceptual Development

The frameworks discussed in the previous section regarding the sustainable consumption process (refer to Section 2.2.5) suggest that SCBs are influenced by positive SCAs, which, in turn, are shaped by specific value systems. Previous research has linked altruism to the development of positive SCAs and engagement in SCBs (Wang et al., 2020; Yarımoğlu & Binboğa, 2018). Conversely, materialism has been found to have a negative association with SCAs and SCBs (Malodia & Bhatt, 2019; Suarez et al., 2020). Therefore, it can be inferred that altruistic individuals are more inclined towards participating in sustainable consumption practices compared to materialistic individuals.

To foster sustainable consumption, marketers and policymakers employ various approaches aimed at influencing consumer values through nudging techniques or manipulation mechanisms (Haider et al., 2022; White, 2019). The reviewed literature in the previous section indicates that priming can make specific value systems more salient or diminish them, depending on the stimulus (Maio et al., 2009; Price, 2016). Consequently, priming is utilized in marketing to prompt or manipulate consumers for advertising purposes and to influence their buying behaviors (Sanyal, 1992). Numerous studies have demonstrated how priming can impact various consumer behaviors based on the stimulus used. For instance, Alcaniz et al. (2022) showed that priming consumers with human body odor increased their decision-making speed when it came to purchasing. Fransen et al. (2008) found that priming individuals with brand-induced thoughts of mortality (through exposure to an insurance brand) heightened their thoughts related to death, resulting in increased spending intentions and donations. Additionally, Jiang et al. (2009) revealed that priming consumers with lucky numbers increased their belief in winning a lottery. Kim (2017) highlighted that priming consumers with cues of loneliness led to increased donations and a greater inclination to purchase nostalgic products.

Furthermore, while the literature has examined the effects of money priming on various consumer behaviors (refer to Section 2.4.3), the investigation of money priming's impact specifically on sustainable consumption is still in its early stages of development. Therefore, this research aims to explore the effects of money priming on sustainable consumption.Considering the framework that highlights the influence of values on attitudes and subsequent behaviors, as well as the existing postulation supporting the idea that values can be influenced through priming, this research will also investigate whether money priming can impact materialism and altruism, which in turn may affect SCAs. However, SCBs will be excluded from the conceptual framework of this research for three main reasons.

One, measuring the effects of priming through scale items that aim to assess the behaviors of participants does not completely translate to the actual behaviors of the consumers (Minton et al., 2017). The perceptual priming which will be utilized in this research measures the priming effect through self-report scales or proposing questions that ask intention to perform a certain behavior as opposed to the behavioral priming which observes the actual behaviors of consumers after the priming inducement (Stajkovic, 2022). Thus, while utilizing the perceptual priming method in order to eliminate the effects of the attitude-behavior gap, excluding questions that intend to measure the direct behavior of the consumers is more desirable.

Two, the questions in a scale that aims to measure the actual SCBs of consumers do not measure the relevant subsequent behaviors of the consumers instead they measure the past behaviors (i.e. Young Consumers' Sustainable Consumption Behavior Scale (Fischer et al., 2017), Sustainable Consumption Behavior Scale (Essiz & Mandrik, 2022). In a priming experiment, the main goal is examining the *immediate responses* or behavioral outcomes of the participants, asking behavioral questions that would indicate their *past behaviors* does not follow the logical temporal order of a priming experiment. For this reason, it is preferable to exclude items that try to measure past behaviors.

And three, the contemporary research already highlighted that SCAs lead the SCBs (Alam et al., 2020; Maichum et al., 2016; Vantamay, 2018; Yang et al., 2018) so even by measuring SCAs of the participants alone, still it can be inferred that the subsequent behaviors of the participants will be correlated with their SCAs. Hence, in this research solely the SCAs of the participants will be measured. Depending on the hypothesis the money priming stimuli and the values that the money priming may influence will be the independent variables and the SCAs will be the dependent variable or money priming will be the sole independent variable and the materialism and altruism values along with the SCAs will be the dependent variables . The formation of the conceptual framework leads to the next section of the thesis which is the hypotheses development.

3.3 Hypotheses Development

3.3.1 Money Priming on SCAs

The first hypothesis will examine the relationship between money priming and SCAs. Based on the previous literature review, SCAs have been identified as a significant determinant of engaging in SCBs (Ajzen, 1991; Terlau & Hirsch, 2015; Wei et al., 2017), and the formation of favorable SCAs is influenced by various preceding and subsequent factors. For example, both pro-environmental and prosocial behaviors have been found to be positively associated with SCAs (Capiene et al., 2022). Additionally, collectivism has been positively linked to SCAs (Leonidou, 2010). Moreover, the conceptual model adapted by Quoquab and Mohammad (2020) emphasizes that SCAs serve as a mediating variable between predictors of SCBs and the actual behavioral outcomes. The model suggests that the formation of favorable SCAs depends on factors such as universalism (concern for the welfare of others) and benevolence, along with other predictors (refer to Section 2.2.3). Furthermore, the literature review has also highlighted the negative relationship between the consequences of money priming and the components that comprise SCAs. Specifically, the self-sufficiency orientation induced by money priming has been found to decrease individuals' willingness to help (Vohs et al., 2006; Mok & Cremer, 2018), diminish collectivism (Savani et al., 2016), reduce benevolence (Roberts & Roberts, 2012), and attenuate sensitivity towards others (Gasiorowska et al., 2016). These findings suggest that money priming may also decrease universalism among individuals, as it has been observed to evoke feelings of disconnection from others (Ma et al., 2017). Chartrand and Jefferis (2004) explained that priming individuals with certain stimuli can redirect their values, leading to changes in specific attitudes. Given the contrasting relationship between the consequences of money priming and SCAs on similar factors, it can be argued that money priming should decrease SCAs. Therefore, the following hypothesis is proposed:

Hypothesis 1: Money priming will negatively affect sustainable consumption attitudes (those that are primed with money will have lower SCAs).

3.3.2 Money Priming, Materialism, and SCAs

The literature review conducted in the previous chapter has indicated that priming is associated with activating or suppressing certain values depending on the stimulus used (Maio et al., 2006; Price, 2016). However, the specific values activated by money priming have not been clearly identified in the literature, despite the observation that it induces a self-sufficiency orientation (Vohs et al., 2006). The consequences of money priming have been primarily linked to selfish (Ekici et al., 2019), individualistic (Broda, 2019), and egocentric (Caruso et al., 2009) behaviors. The analysis of values and their association with specific value systems, utilizing Schwartz's Human Values Inventory (HVI), is presented in the previous chapter (refer to Section 2.3.). It appears that individuals who prioritize self-enhancement values over self-transcendence values are more likely to exhibit egocentric and individualistic behaviors (Crilly et al., 2008; Schwartz, 1992). The literature review also revealed a connection between materialistic value orientation and the adoption of self-enhancement values (Thyroff & Kilbourne, 2018). Individuals who embrace a materialistic value system tend to engage in individualistic (Wong, 1997), selfish (Williams & Bryce, 1992), and egocentric (Shek et al., 2022) behaviors, similar to those exhibited by individuals who are primed with money.

Furthermore, it has been noted in the literature that the consequences of money priming include reduced generosity (Gasiorowska & Helka, 2012), feelings of detachment from others (Macdonald, 2019), and a heightened focus on one's public self rather than their private self (Kim, 2017). These same consequences are observed in individuals who embrace a materialistic value orientation (Pieters, 2013; Schroeder, 1995; O'Reilly et al., 2012). This correspondence suggests that both the effects of

money priming and the adoption of materialistic values result in individuals being less generous, experiencing social detachment, and prioritizing their public self. It can be inferred from this similarity that money priming activates materialistic values within individuals.

As discussed earlier, materialism has been consistently found to have a negative relationship with both SCAs and SCBs. Hurst et al. (2013) conducted a study that demonstrated how materialism is in opposition to sustainable consumption. Adopting a materialistic value orientation leads individuals to engage in reckless and conspicuous consumption patterns, which are not aligned with sustainable practices. Additionally, several studies cited in the literature review have shown a negative association between materialism and frugal behavior, environmental concern, and environmental responsibility (Suarez et al., 2020; Gatersleben, 2010; Costa et al., 2021). Thus if money priming makes the materialism value of the individuals more salient, it may negatively affect SCAs. In light of the preceding discussion, the following hypotheses can be proposed:

Hypothesis 2: Money priming will positively affect materialism (those that are primed with money will have higher materialism).

Hypothesis 3: Materialism is negatively related to SCAs.

3.3.3 Money Priming, Altruism, and SCAs

As mentioned earlier, altruism is defined as engaging in prosocial behavior driven by empathy, without expecting any specific rewards or personal benefits (Büssing et al., 2013; Johansson-Stenman, 1998; Sober & Wilson, 1998). The literature review conducted in the previous chapter has indicated that an altruistic value orientation is associated with the endorsement of self-transcendence values, as defined in Schwartz's Human Values Inventory (Anuar et al., 2020; Schwartz, 1992). These self-transcendence values reflect concern and care for the well-being of others and the

environment. Therefore, individuals with an altruistic value orientation are more likely to demonstrate a greater tendency to engage in both SCAs and SCBs, as suggested by the literature. Many studies have established a positive correlation between altruism and various indicators of sustainable consumption, including higher environmental concern, environmental responsibility, and engagement in pro-environmental behaviors (Costa et al., 2021; de Groot & Thogersen, 2018; Dietz et al., 2002; Loureiro & Lima, 2019; Gatersleben, 2010).

Moreover, the consequences of money priming have been shown to make individuals more selfish (Jiang et al., 2014; Kouchaki et al., 2013), unethical (Gino et al., 2014), and less inclined to help others (Pfeffer & Devoe, 2009). Money priming has also been found to reduce pro-social behavior (Mok & De Cremer, 2016) and foster individualistic tendencies (Savani et al., 2016). Additionally, money priming has been observed to decrease empathy, as individuals primed with money demonstrate less sensitivity towards other people's emotions (Molinsky et al., 2012). These findings suggest that money priming may diminish the altruistic value orientation of individuals, as the effects of money priming are contradictory to embodying an altruistic value. The previous section also examined the relationship between money priming and materialism. The similarities in behaviors and traits between high materialist consumers and individuals primed with money provided the rationale for the first hypothesis. It is important to note that people cannot hold opposing values simultaneously (Burroughs and Rindfleisch, 2002). Furthermore, the existing literature consistently indicates a negative relationship between materialism and altruism, with the behavioral outcomes of these two value systems being inherently contradictory (Belk, 1985; Costa et al., 2021; Gatersleben, 2010). Therefore, if money priming is assumed to make the materialism value more salient, it is expected to attenuate the altruism value in individuals. Because the altruism value is positively linked with SCAs (Bautista, 2020; Yarımoğlu & Binboğa, 2019), it follows that if money priming reduces the altruism value of individuals, their SCAs should be negatively affected respectively. So, the following hypotheses are proposed:

Hypothesis 4: Money priming will negatively affect altruism (those that are primed with money will have lower altruism).

Hypothesis 5: Altruism is positively related to SCAs.

3.3.4 Conceptual Model

The conceptual model is established by analyzing these aforementioned constructs: (a) money priming, (b) materialism, (c) altruism, (d) sustainable consumption attitudes (see Figure 1). The proposed hypotheses are indicated next to the arrows.

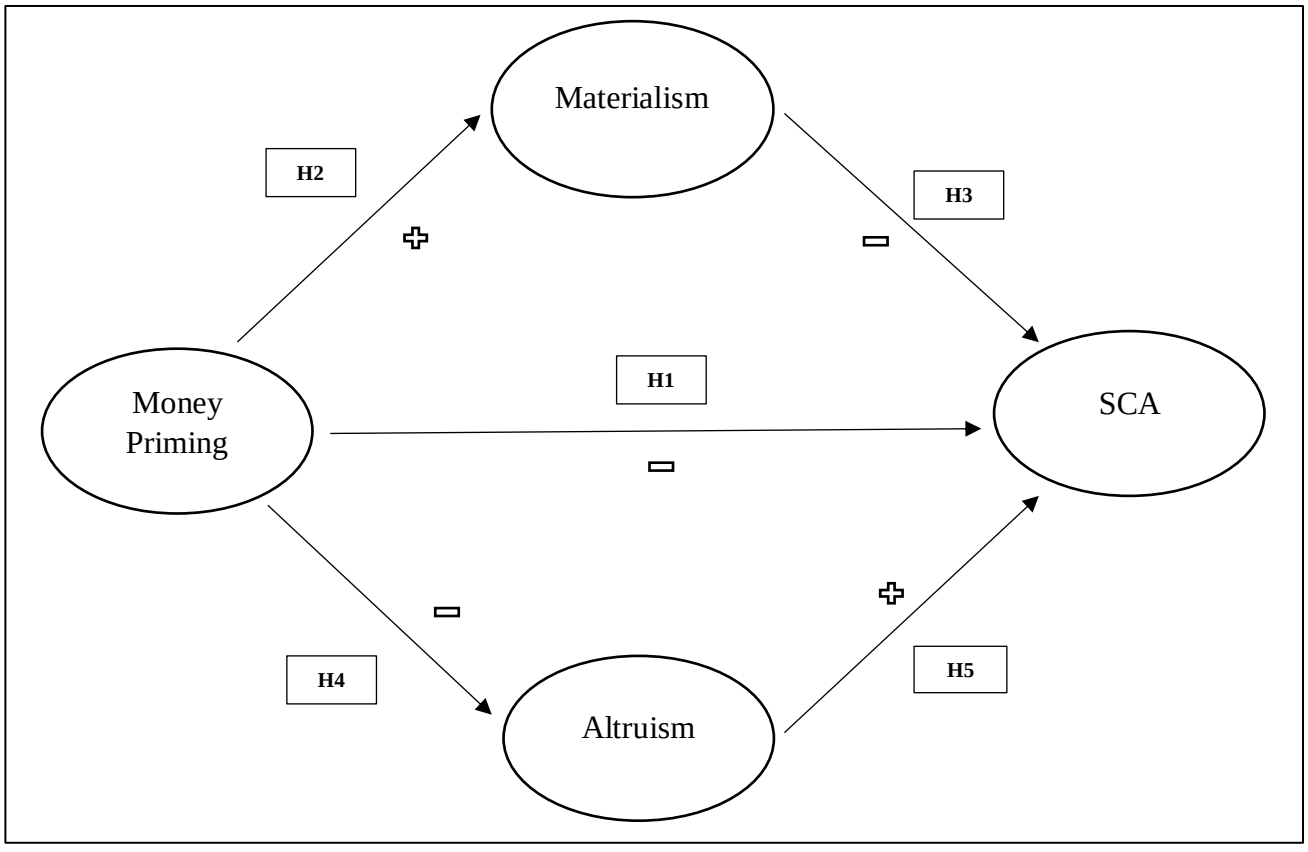

Figure 3. 1. Conceptual Model

CHAPTER 4
METHODOLOGY

4.1 Chapter Summary

After developing the conceptual model and research hypotheses in the previous chapter, this chapter presents the experimental methodology. The aim of this thesis is to investigate the effects of money priming on altruism and materialism values, and sustainable consumption attitudes (SCAs). To demonstrate these effects, two distinct experimental designs have been constructed. The initial section provides an overview of the pretests conducted to formulate the experiments. The subsequent section outlines the sampling and data collection method, along with the experimental schemes for Experiment I (materialism) and Experiment II (altruism) respectively. The final section provides details about the instruments utilized to measure and assess the levels of materialism, altruism, and SCAs.

4.2 Overview of the Pretests

Following the development of the conceptual model and research hypotheses through an examination of the current literature, aimed at testing the effects of money priming on materialism, altruism, and SCAs, the subsequent stage of the research involved designing a pretest. The pretest aimed to determine the specific money priming method to be used and assess whether priming participants with the selected methods would impact their self-sufficiency orientation (thus analyzing the effectiveness of money priming) and their environmental cognition.

Method Selection

Consequently, the initial step involved a thorough analysis of money priming studies in the existing literature to assess the commonly utilized priming methods for the encoding phase. The aim was to determine the most effective priming method. Before delving into specific priming methods, a comprehensive examination of priming methods in general was conducted. It was observed that there are numerous variations of priming methods, each with distinct underlying mechanisms (Bermeitinger, 2016; Schacter & Bucker, 1998; Wentura & Degner, 2010).

Phrase(Word) Unscrambling: Making participants unscramble jumbled word groups into a meaningful sentence. The oriented sentence itself or the selected words which represent the stimulus has the intention of priming the participants.

Word Completion: The priming stimulus is given to the participants as words with missing letters. Participants complete the words by inserting missing letters.

Word Association: Demonstrating the priming stimulus to the participants as a word and expecting participants to either use the given words in a sentence or continue writing relevant words that would associate with the priming stimulus.

Environmental Sounds: Priming participants by making them listen either music that include the lyrics of the priming stimulus, or sounds that directly repeat the reminders of the priming stimulus.

Visual Patterns: Either exposing the priming stimulus to the participants as an image or visual cues such as an object that would prompt the priming stimulus.

Upon examining the money priming literature regarding the utilized methods, it becomes evident that researchers have employed either the aforementioned conventional priming methods or have devised their own approaches by combining different methods, thereby creating innovative techniques.

Initially, along with the experiment conducted by Vohs et al. (2006), which served as the foundation of money priming research, many other studies utilized the phrase descrambling method (Boucher & Kofos, 2012; Mogilner, 2010; Molinsky et al., 2012; Pfeffer & Devoe, 2009; Teng et al., 2016). This method was either employed to replicate the results of Vohs et al. (2006) or chosen as a reliable approach based on desirable outcomes observed in other studies. Other researchers employed different methods to prime participants with money. For instance, Gasirowska and Helka (2012) implemented an "accounting task" where participants were divided into two groups: the money group and the control group. The money group was required to count coins on a computer screen within two minutes, while the control group counted candies. In Kim's study (2016), participants watched a seven-second video during the encoding phase. The money group observed a hand counting $10 bills, while the control group viewed a hand counting plain white papers. Similarly, Caruso et al. (2017) used a method similar to Vohs et al.'s (2006) screen saver technique, where the money group participants encountered a faded image of $100 bills on the initial instruction screen of a fake test, whereas the control group saw a blurred version of the same image, making the bills unrecognizable. Shapira et al. (2014) employed a method called perceptual estimation, presenting participants with seven rectangles of different sizes. The money group had to select the best three sizes for $50, $20, and $10 bills, while the control group selected the best sizes for post-it notes. Furthermore, Agakhani et al. (2019) had the money group touch and examine real money, while the control group examined fake money labeled as "specimen." Macdonald (2019) combined multiple money priming methods in a study consisting of 15 separate tasks. These tasks included a word identification challenge, reordering a list of words alphabetically, and estimating the number of objects in an image. The money group was exposed to money-related concepts throughout the tasks, while the control group was primed with neutral concepts.

After examining the various money priming methods, we decided to conduct multiple pretests to determine the most effective method to be used in the experiment.

Therefore, two money priming methods were selected. The first method chosen was the phrase unscrambling method, which had been utilized in the study by Vohs et al. (2006) and many other aforementioned money priming experiments. This method has been shown to be the most commonly used and effective manipulation across multiple studies. (Boucher & Kofos, 2012; Mogilner, 2010; Teng et al., 2015; Molinsky et al., 2012; Pfeffer & Devoe, 2009). As for the second method, we aimed to combine two effective methods from money priming research to investigate whether combining different methods enhances the priming effect. Following this design, Macdonald (2019) implemented multiple money priming methods simultaneously and observed a strong priming effect.

The first selected method was the image representation method, which has been employed in numerous money priming experiments, similar to the phrase descrambling method, and has yielded favorable outcomes in terms of inducing a self-sufficiency state among participants (Gasirowska & Helka, 2012; Mukherjee et al., 2013; Roberts & Roberts, 2012). The second method chosen to complement the image representation method was the paragraph writing method. This method prompts participants to personally construct a mental representation of money and encourages them to articulate their thoughts about money on paper, potentially enhancing their exposure to the priming stimulus. To ensure participants utilize relevant concepts aligned with the priming stimulus, a word list was created. By incorporating the provided words into their paragraphs, the likelihood of participants being primed with unintended stimuli was minimized. Similar paragraph writing methods have been employed in the money priming literature, successfully activating the concept of money (Caruso et al., 2017; Molinsky, 2012; Vohs et al., 2006).

Overall, two pretests were developed: one to assess the effectiveness of the phrase descrambling method and another to evaluate the paragraph writing method combined with image representation. In total, there were two experimental groups that used different money priming methods to prime participants with money-related concepts,

as well as two control groups that employed the same methods but primed participants with neutral concepts instead:

Pretest I: Phrase Descrambling Method

Group 1: Money Group (Experimental Group)

Group 2: Neutral Group (Control Group)

Pretest II: Paragraph Writing Method

Group 1: Money Group (Experimental Group)

Group 2: Neutral Group (Control Group)

Before presenting the structure and design of the pretests, it is important to provide an overview of the measures used in these pretests.

Measures of the Pretest

After deciding on the money priming methods, the choice of response technique for the experiments became necessary. In order to reach a larger number of participants, create a more convenient experimental condition, and easily incorporate multiple variables for measurement, the perceptual response technique was selected over the behavioral response technique. For a detailed explanation of the distinction between perceptual priming and behavioral priming, please refer to Section 2.4.1. Consequently, a self-report scale was developed to assess the impact of the priming stimulus. The Likert Scale, ranging from 1 to 5 (1= Strongly Disagree, 5= Strongly Agree), was utilized to measure the items.

The scale initially consisted of five items. The first two items were included to assess the participants' self-sufficiency levels and to evaluate the effectiveness of activating the money concept, as suggested by Vohs et al. (2006). To measure self-sufficiency, the same self-sufficiency scale used by Shiri et al. (2018) was adopted, given its demonstrated reliability (Cronbach's $\alpha = 0.88$) and ability to induce self-

sufficiency orientation. The following two items were selected to measure environmental cognition, including one item from the Green Scale (Haws et al., 2014) and one independently constructed item aimed at evaluating participants' environmental consciousness. The reliability analysis of the scale yielded a Cronbach's α coefficient of 0.737. The final item aimed to assess the perceived difficulty of the priming tasks in order to determine which task was easier for the participants between Pretest I and Pretest II. In summary, the five items were employed to measure the variables of interest. The subsequent section will present an overview of the structure and contents of the pretests.

Structure and the Design of the Pretests

Following the determination of the contents, the structure of the pretests was established. As previously mentioned, two experiments were designed, each employing a different money priming method, with two groups assigned to each experiment (experimental and control). Consequently, four questionnaires were created, each consisting of three pages. The pages included the informed consent form, the money priming method, and the measures to be administered.

The informed consent form provided participants with an introduction to the experimenter, a clear explanation of the study's purpose, and relevant information regarding the rights of participants. The final section of the informed consent form explicitly stated that participants were consenting to participate in the experiment (refer to Appendix A for the informed consent form). Following the informed consent form, the second page of the questionnaire presented the money priming method. Participants were unaware of the true intention behind this method and were led to believe that they were simply completing a task that measured the relationship between verbal skills and various attitudes and behaviors. They were not informed that the task would ultimately prime them with money. The designs of the money priming methods are outlined below.

Pretest I: Phrase Unscrambling Method

The design of the phrase unscrambling method was adapted from the experiment conducted by Vohs et al. (2006), although some modifications were made to the structure of the task. In the original experiment, participants were presented with 30 sets of mixed words and were required to rearrange them to form meaningful sentences. Some of the word groups consisted of five words. However, in Pretest I, there were 20 sets of mixed words, and all of them contained only four words. The phrases used for both the experimental group and the control group were either modified from the descrambling task created by Vohs et al. (2006) or developed independently.

Group 1: Money Group (Experimental Group)

The phrase unscrambling method consisted of ten mixed word groups designed to prompt participants to think about money by including reminders and symbols related to it (e.g., “comfort money bring can” became “money can bring comfort”). The other ten mixed word groups were aimed at priming participants with neutral concepts (e.g., “pancakes loves she eating” became “she loves eating pancakes”) when ordered correctly. The order of the mixed word groups was randomized for each participant (see Appendix B for details).

Group 2: Neutral Group (Control Group)

In the control group, all 20 mixed word groups were transformed into meaningful sentences to prime participants with neutral concepts (see Appendix C for details).

Pretest II: Paragraph Writing Method

The second experiment employed the paragraph writing method to prime participants. In this method, participants were provided with a word list consisting of seven words that they were required to incorporate into their sentences. Additionally, a picture was displayed at the top of the writing space to enhance the priming effect. It

is important to note that the word list and picture differed between the money group and the control group (see Appendix D for details).

Group 1: Money Group (Experimental Group)

In the money group, participants were given a set of seven words that were all associated with the concept of money (e.g., dollar, cash, wealth). They were instructed to write a paragraph consisting of four to five sentences, incorporating these words. Furthermore, a picture depicting money bills from various countries was displayed to further prime the participants with the concept of money (see Appendix D for reference).

Group 2: Neutral Group (Control Group)

In the control group, participants were exposed to a different priming condition where neutral concepts were used. They were presented with a picture depicting a table with two bottles of water placed on top of it, and four chairs arranged around it. The word list provided to the participants consisted of seven neutral concepts such as chair, table, and café. Similar to the experimental group, participants were instructed to write a paragraph comprising 4-5 sentences based on these concepts (see Appendix E for reference).

The last page of all the questionnaires contained a 5-point Likert Scale used to evaluate the predetermined measures. The items employed in the questionnaires to assess the variables of interest were identical for all the pretests, with the exception of the fifth item, which measured the difficulty of the task. This modification was necessary due to the use of different tasks in the experiments. The table below presents the items used to construct the scale.

Table 4. 1.The Items from the Self-Eeport Scale of the Pretests

The Self Report Scale Measures	
Self-Sufficency(1)	Right now I feel like I would prefer to be independent from others.
Self-Sufficiency(2)	At this moment I feel like I would prefer people to be independent from me.
Environmental Cognition(1)	I would describe myself as an environmentally responsible person.
Environmental Cognition(2)	I believe climate change is an important problem that we are facing.
Difficulty	The phrase unscrambling task (or "paragraph writing task" depending on the experiment) was difficult to solve.

The final section of the page included the personal information section, which requested participants to provide details regarding their gender, age, and nationality. This was done to collect essential demographic information (refer to Appendix F). The subsequent and concluding segment of this section will present the results obtained from the pretests.

Pretests Results

After obtaining approval from the METU NCC Scientific Research and Publication Ethics Committee (see Appendix G), the pretests were carried out on randomly selected METU NCC students. A total of one hundred students from METU NCC participated in the pretests, with each pretest consisting of 50 participants. The participants were divided into two groups based on the experimental condition they were assigned to:

Pretest I: Phrase Descrambling Method: N=50

Group 1: Money Group (Experimental Group): N=25

Group 2: Neutral Group (Control Group): N=25

Pretest II: Paragraph Writing Method: N=50

Group 1: Money Group (Experimental Group): N=25

Group 2: Neutral Group (Control Group): N=25

The initial step involved assessing the effectiveness of the priming methods employed. According to Vohs (2015), numerous money priming studies conducted worldwide (including over 160 studies from 18 different countries) consistently revealed that priming individuals with money reduces their sensitivity towards others, fosters a desire for independence, and decreases their level of supportiveness compared to neutral priming. These behavioral outcomes can be attributed to the self-sufficiency orientation induced by money priming (Caruso et al., 2017; Mok & De Cremer, 2018; Schuler & Wanke, 2016; Vohs et al., 2006). By assessing the participants' self-sufficiency orientation following each implementation of the money priming method, it becomes possible to infer the effectiveness of the priming stimulus.

Consequently, the self-sufficiency scale developed by Shiri et al. (2016) was incorporated into the questionnaires to evaluate the participants' self-sufficiency levels following the priming with either money or neutral concepts. The objective was to observe higher levels of self-sufficiency among participants after being primed with money compared to neutral concepts. Additionally, another objective of this analysis was to examine the means of environmental cognition (EC) levels among the groups in each pretest. If the EC levels were found to decrease in the money group compared

to the control group in each pretest, it would indicate a negative influence of money priming on SCAs. Hence, in addition to comparing the means of self-sufficiency levels, the means of environmental cognition levels were also evaluated.

Following data collection, independent samples t-tests were performed for each pretest utilizing distinct money priming methods. The information pertaining to item-by-item mean scores, t-values representing mean differences between the groups in self-sufficiency (SS) and environmental cognition (EC) variables, as well as the mean scores and t-values for the self-sufficiency and EC scales, are presented in Table 4.2 and Table 4.3. These tables provide a comprehensive overview of the analysis results.

Table 4. 2. Independent Samples T-test Results of Pretest I (Phrase Unscrambling Method) for Self-sufficiency and Cognitions of the Environment Measures

Variable	Condition	N	Mean	SD	DF	T	Sig.
SS1	Money Group	25	4,0800	0,8124	48	2,556	0,014
	Neutral Group	25	3,3600	1,1504			
SS2	Money Group	25	3,3200	1,1446	48	0,529	0,599
	Neutral Group	25	3,1600	0,9866			
SSscale	Money Group	25	7,4000	1,6833	48	1,724	0,091
	Neutral Group	25	6,5200	1,9175			
EC1	Money Group	25	3,3200	1,2152	48	-1,525	0,134
	Neutral Group	25	3,3800	1,0000			
EC2	Money Group	25	3,3200	1,3760	48	-2,794	0,007
	Neutral Group	25	4,3200	1,4446			
ECscale	Money Group	25	6,6400	2,4644	48	-2,464	0,018
	Neutral Group	25	8,1200	1,7156			

Table 4. 3. Independent Samples T-test Results of Pretest II (Paragraph Writing Method) for Self-sufficiency and Cognitions of the Environment Measures

Variable	Condition	N	Mean	SD	DF	T	Sig.
SS1	Money Group	25	3,9600	1,0198	48	1,094	0,279
	Neutral Group	25	3,6000	1,2910			
SS2	Money Group	25	3,6000	0,9129	48	1,534	0,132
	Neutral Group	25	3,1600	1,1060			
SSscale	Money Group	25	7,5600	1,5567	48	1,618	0,112
	Neutral Group	25	6,7600	1,9209			
EC1	Money Group	25	3,2000	1,0841	48	-2,661	0,011
	Neutral Group	25	3,9600	0,9871			
EC2	Money Group	25	3,5600	1,1210	48	-2,849	0,006
	Neutral Group	25	4,4000	0,9574			
ECscale	Money Group	25	6,7600	1,7861	48	-3,197	0,002
	Neutral Group	25	8,3600	1,7531			

The group statistics for Pretest I of the SS scale indicate that the mean scores between the money group and the neutral group are not significantly different. However, it is worth noting that the means for one of the self-sufficiency items (SS1) exhibit a significant difference between the groups. One the other hand, The EC scale demonstrates a significant mean difference between the groups, despite one of the environmental cognition items (EC1) showing an insignificant mean difference. Shifting focus to the Pretest II, the results reveal that the mean scores for the EC scale, as well as all EC items, show a significant difference between the money group and the neutral group. Conversely, no significant differences were observed for the SS Scale and its corresponding items. Additionaly no significance is achieved between the mean differences of the groups for the difficulty measure in both pretests.

It is important to acknowledge that the sample size for each group in the pretests were limited to 25 participants, which may have impacted the observed differences in the mean scores. However, despite this limitation, certain mean differences yielded valuable insights for future experiments, highlighting the effectiveness of both pretests. Consequently, the following section will present the derived inferences from the pretest results, followed by a detailed analysis of the data interpretation.

Inferences

- The t-test scores conducted for Pretest I, employing the phrase unscrambling method, revealed that the difference in scores on the SS scale between the money group (M = 7.4000, SD = 1.6833) and the neutral group (M = 6.5200, SD = 1.9175) was not statistically significant ($t(48) = 1.724$, $p = 0.091$). However, when considering individual items, SS1 exhibited a significant difference between the money group (M = 4.0800, SD = 0.8124) and the neutral group (M = 3.3600, SD = 1.1504) ($t(48) = 2.556$, $p = 0.014$), whereas SS2 showed no significant mean difference (M = 3.3200, SD = 1.1446; M = 3.1600, SD = 0.9866) ($t(48) = 0.529$, $p = 0.599$) between the groups in Pretest I. Notably, when considering both the statistical significance between the means of the money group and the neutral group for SS1 and the fact that all mean scores of SS items and the overall scale were higher in the money group compared to the neutral group, it can be inferred that the SS Scale partially succeeded in inducing a self-sufficiency mindset among the participants.

- The t-test results from Pretest II, employing the paragraph writing method, revealed that the mean difference between the money group (M = 7.5600, SD = 1.5567) and the neutral group (M = 6.7600, SD = 1.9209) on the SS scale was not statistically significant ($t(48) = 1.618$, $p = 0.112$). Similar findings of statistical non-significance were observed for the individual SS items between the money group (M = 3.9600, SD = 1.0198; M = 3.6000, SD = 0.9129) and

the neutral group (M = 3.6000, SD = 2.2910; M = 3.1600, SD = 1.1060) (t(48) = 1.094, p = 0.279; t(48) = 1.534, p = 0.132). These mean scores of the SS scale and its individual items were comparable to those observed in Pretest I. The results indicate that, although the money group in both pretests displayed higher self-sufficiency scores compared to the neutral group, this difference was not statistically significant. Consequently, both money priming methods were deemed suitable for use in the further experiment, as participants in both pretests exhibited higher mean self-sufficiency scores in the money group compared to the neutral group. Although statistical significance was not achieved for all SS items in the paragraph writing method, it is noteworthy that the p-values for the SS items were close to the significance level (p = 0.05) despite the limited sample size in the current study, future experiments with an expanded sample size may yield more robust findings regarding the induction of the self-sufficiency mindset.

- The Environmental Cognition (EC) Scale comprised two items, and the analysis revealed a significant difference in the mean scores between the money group (M = 6.6400, SD = 2.4644) and the neutral group (M = 8.1200, SD = 1.7156) on the EC scale for the Pretest I (t(48) = -2.464, p = 0.018). Regarding EC1, the group statistics indicated a non-significant mean difference between the money group (M = 3.3200, SD = 1.2152) and the neutral group (M = 3.3800, SD = 1.0000) (t(48) = -1.525, p = 0.134). However, the mean scores for EC2 in the money group (M = 3.3200, SD = 1.3760) and the neutral group (M = 4.3200, SD = 1.4446) did exhibit a significant mean difference (t(48) = -2.794, p = 0.007). These findings suggest that the Environmental Cognition scale effectively evaluated participants' understanding of the environment. Notably, all the mean scores for the EC Scale and its individual items were higher in the neutral group compared to the money group, indicating that participants primed with money displayed lower levels of environmental cognition.

- The t-tests results of the EC measure for the Pretest II was not completely different from the Pretest I results and the difference between the scores of the ECscale for the money group (M = 6,7600, SD = 1,7861) and the neutral group (M = 8,3600, SD= 1,7531); t(48) = -3,197, p= 0,002) was significant. However, this time both of the mean differences of the EC items between the money group (M = 3,2000, SD = 1,0841; M= 3,5600, SD = 1,1210) and the neutral group (M = 3,9600, SD = 0,9871; M = 4,4000, SD = 0,9574); (t(48) = -2,661, p = 0,011; t(48) = -2,849, p = 0,006) were significantly different from each other. In the end, for both pretests all the mean scores for the money group was lower than the neutral group and all the t values were negative. It can be interpreted from the results that both of the methods were succesuful with regards to showing that the environmental cognition of the participants decresases significantly when primed with money which may infer that money priming migh indeed decrease the levels of SCA levels of the consumers.

The second and the last part of the data interpretation was analyzing the mean scores between the difficulties of the money priming methods in order to distinguish the easier money priming task to complete for the participants. Thus, the mean scores of the item five (level of difficulty of the task) were compared between the groups and the pretests. As it was mentioned before, participants indicated the level of difficulty of the task on a 5-point Likert Scale (1=Strongly Disagree; 5= Strongly Agree), and the following mean scores were achieved:

Table 4. 4. The Independent Samples T-tests results for the Difficulty Measure between the Pretests

Condition	N	Mean	SD	DF	T	Sig.
Money Group (Phrase Unscrambling)	25	2,3600	1,55134	48	-1,178	0,245
Money Group (Paragraph Writing)	25	2,8000	1,04083			
Neutral Group (Phrase Unscrambling)	25	2,0000	1,52753	48	-1,082	0,285
Neutral Group (Paragraph Writing)	25	2,4000	1,04083			

- The mean scores of the Difficulty Measure (DM) in the pretests suggest that the phrase unscrambling task and the paragraph writing task were perceived to have similar levels of difficulty. While the mean scores of the DM for the phrase unscrambling task were lower than those for the paragraph writing task in both the money group ($M = 2.3600 < M = 2.8000$) and the neutral group ($M = 2.000 < M = 2.400$), the results of the independent sample t-tests revealed no statistically significant mean difference between the difficulty scores of the unscrambling task and the paragraph writing task for either the money group ($t(48) = -1.178$, $p = 0.245$) or the neutral group ($t(48) = -1.082$, $p = 0.285$). These non-significant differences in means indicate that no conclusions can be drawn regarding the relative difficulty of the two methods. The chosen cutoff point for considering a task as difficult was set at three, and all groups in the pretests indicated that the perceived difficulty of both the phrase unscrambling task and the paragraph writing task was below three. Ultimately, both methods employed in the experiment were deemed suitable.

Highlights of the Pretests' Results

- Both of the money priming methods were partially succesfull in terms of inducing self-sufficiency orientation to the participants even though the phrase unscrambling method was sligtly better because one of the SS items showed statistical significance between the means of the money group and the neutral group.
- EC Scale did succesfully measure the environmental awareness of the participants in both methods and when primed with money participants indicated lower levels of EC in both of the methods.
- The difficulty of the methods were deemed to be similar for the participants. No statistical significance achieved in the difference between the mean scores among the groups and the methods.

After interpreting the pretest data, we proceeded with refining and commencing the main experiment. The results of the pretests indicated that both money priming methods were suitable for the experiment, as they yielded mostly similar outcomes. Consequently, we decided to conduct two separate experiments, employing each selected money priming method individually and assigning the measurement of values exclusively to each experiment. This approach aimed to effectively and systematically assess the changes in the variables. The subsequent section provides a comprehensive presentation of the experimental structure, design, and implementation details

4.3 Overview of the Experiments

4.3.1 Experiment I

Experiment 1 is designed to assess the hypotheses proposed in the previous chapter, specifically hypotheses 1, 2, and 3. The first hypothesis examines the impact of money priming on SCAs. The second hypothesis investigates the potential influence

of money priming on materialism and third hypothesis focuses on examining the relationship between SCAs and materialism.

4.3.2 Sampling and the Data Collection of the Experiment I

Experiment I employed a true experimental design, as all participants were randomly selected and had an equal opportunity to be assigned to either the experimental group or the control group. The research approach adopted for this experiment was quantitative, utilizing a questionnaire comprising a combination of surveys. Data collection was carried out using the paper and pencil method. Simple random sampling was employed to select the sample for the research, with Middle East Technical University Northern Cyprus Campus students serving as the target population.

Experiment I comprised a total of one hundred and ninety participants. The sample consisted of 100 male participants (52.6%), 85 female participants (44.7%), and 5 participants from other genders (2.6%). The age groups of the participants were primarily distributed between 18-21 (43.2%) and 22-25 (49.5%). Regarding the participants' nationalities, they were classified into three categories. The majority of the participants in the chosen sample were from Turkey (68.9%), followed by individuals from "other" countries such as Jordan, Pakistan, and Egypt (23.2%). A small portion of the sample represented Turkish Cypriots (7.9%). The frequency table illustrating the demographics of the participants is presented in Table 4.8 below:

Table 4. 5. The demographics of participants in Experiment I

	Frequency	Percent (%)
Gender		
Male	100	**52,6**
Female	85	**44,7**
Other	5	**2,6**
Age		
18-22	115	**60,5**
23-27	71	**37,4**
28 or more	4	**2,1**
Nationality		
Turkish	131	**68,9**
Turkish Cypriot	15	**7,9**
Other Nationalities	44	**23,2**
Total Participants	**190**	**100%**

4.3.3 Experiment II

Experiment II aims to assess hypotheses 1, 4, and 5 proposed in the preceding chapter. Specifically, it aims to retest the impact of money priming on SCAs and investigate the influence of money priming on altruism. Additionally, the experiment seeks to examine the relationship between SCAs and altruism.

4.3.4 Data Collection and Sampling of the Experiment II

The Experiment II utilized an identical research design, data collection, and sampling method as employed in Experiment I (refer to Section 4.2.1). The sole distinction between the two experiments lies in the measures employed to evaluate the independent variables, which will be elaborated upon in the subsequent section.

Experiment II comprised a total of one hundred and forty participants. The sample consisted of 71 male participants (50.7%), 67 female participants (47.9%), and two participants from other genders (1.4%). The age groups of the participants mainly ranged between 17-21 (40%) and 22-26 (57.9%). Regarding the participants' nationalities, they were classified into three categories. The majority of the participants in the chosen sample were from Turkey (65.7%), followed by individuals from "other" countries such as Jordan, Pakistan, and Egypt (22.1%). The remaining portion of the sample represented Turkish Cypriots (12.2%). The frequency table presenting the demographics of the participants is provided in Table 4.9 below.

Table 4. 6. The demographics of participants in Experiments II

	Frequency	Percent (%)
Gender		
Male	71	**50,7**
Female	67	**47,9**
Other	2	**1,4**
Age		
17-21	56	**40**
21-26	81	**57,9**
27	3	**2,1**
Nationality		
Turkish	92	**65,7**
Turkish Cypriot	17	**12,2**
Other Nationalities	31	**22,1**
Total Participants	140	**100%**

4.3.5 Experimental Models and the Execution of the Experiments

This section will present information regarding the experimental designs, the medium of data collection, and the final stages of experimentation for Experiment I and Experiment II. The structure of the experiments is illustrated in Figure 4.1 below.

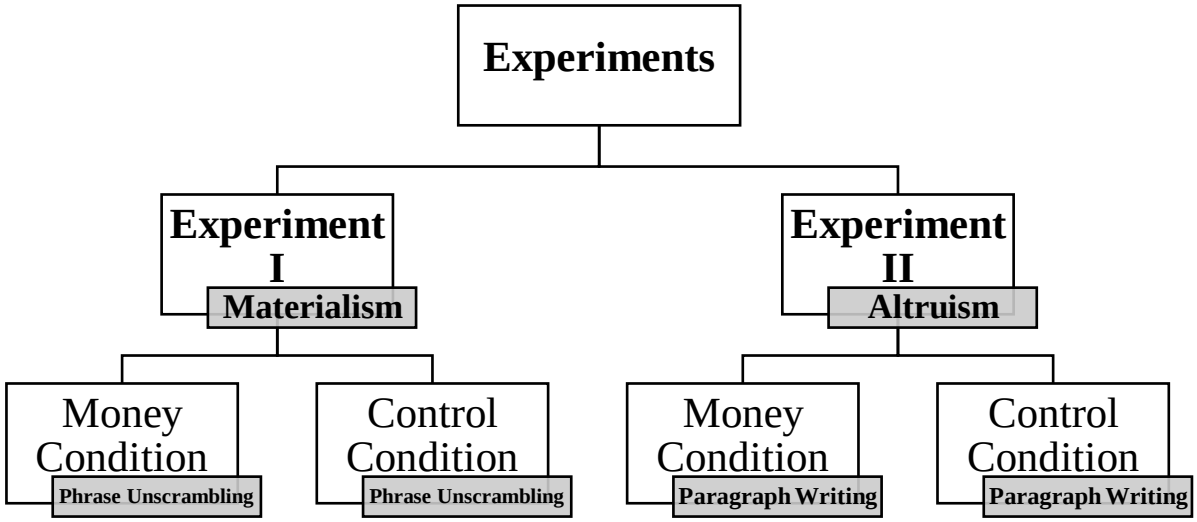

Figure 4. 1. The Structure of the Experiments

Considering the aim of examining the effects of money priming on materialism, altruism values, and SCAs, two experiments were designed. The first experiment focused on materialism's relationship between money priming and SCAs, while the second experiment addressed altruism's relationship between money priming and SCAs. As depicted in Figure 4.3, the results of the pretests supported the use of both money priming methods. Therefore, the unscrambling method was employed for Experiment I, and the paragraph writing method was used for Experiment II. The

questionnaire layout followed the same structure as the pretests, with each questionnaire consisting of three pages. The first page contained the Informed Consent Form, identical to the pretests, except for the research purpose, which was stated as, "The purpose of this study is to examine how verbal skills are related to various attitudes and behaviors" (see Appendix H). Concealing the main purpose of the experiment aimed to avoid jeopardizing the priming effect, as mentioned earlier, since the priming effect should not activate participants' explicit memory (Bargh & Chartrand, 2000; Schacter & Buckner, 1998). The second page of Experiment I presented the phrase unscrambling task. Similarly to the pretests, the money group was provided with 20 mixed-word groups to unscramble, with 10 of the word groups containing money-related concepts to prime participants with money, while the other 10 mixed-word groups aimed to prime participants with neutral concepts. The control group's 20 mixed-word groups only included neutral concepts. For Experiment II, the second page featured the paragraph writing task, following the same design procedure as Pretest II, with some changes to the word list presented to the control group (see Appendix I). The final page of the questionnaires included the measures. In addition to the measures for estimating SCAs and gathering participants' personal information, Experiment I included additional items to assess the participants' materialism levels, while Experiment II included a scale to evaluate the participants' altruism levels. The items used for the measures and the final structure of the scales implemented in the questionnaires for both experiments are discussed in the following section.

To represent the experimental procedures implemented in a systematic manner, this section is divided into three phases.

1st Phase

The first step was obtaining approval from the METU NCC Scientific Research Ethics Committee (BAYEK). The application form was submitted, and the approval was granted prior to conducting the experiments (see Appendix J).

2nd Phase

The hard copies of the questionnaires for both experiments were obtained, and the locations for distribution were identified. To ensure randomization of the data collection process, the questionnaires from the experimental group and the control group were intermixed in a random manner. The questionnaires were then distributed to random classrooms within incidentally selected academic blocs (either the T building, the R building, or the S building) and to random cafes, including the main cafeteria of the university and local coffee shops (SegaFredo and Mado), on randomly selected weekdays.

3rd Phase

After a sufficient number of responses were collected for the experiments, the data obtained from the participants was inputted into an Excel file, and digital copies of each response were generated. Subsequently, the data was analyzed using IBM SPSS Statistics 25.

4.4 Measures of Independent and Dependent Variables

Structure of the Scales

All of the scales utilized for measuring the constructs of the research (materialism, altruism, and SCAs) have been previously used and validated in past studies. While some items underwent modifications in wording and a shorter version of the scales was employed, the structure of the scales remained consistent. High reliability results were obtained for each scale, which will be presented in the subsequent sections. A 5-point Likert scale ranging from 1 to 5 (1 = “Strongly Disagree,” 5 = “Strongly Agree”) was employed to measure each item from the scales.

4.4.1 The Measure of Materialism and Altruism

This section will introduce the selected scales for measuring the materialism and altruism values of the participants.

Materialism Value Scale (MVS)

Materialism has been examined by researchers from various perspectives. Initially, Campbell (1969) defined materialism as an attitude that influences individuals' behaviors and developed a scale specifically designed to measure participants' materialistic attitudes. However, Belk (1985) challenged the notion of materialism as an attitude and instead proposed it as a personality trait consisting of three dimensions: envy, possessiveness, and non-generosity. Belk's (1985) scale measured materialism as a personality trait across these three dimensions until Ger (1990) added a fourth dimension, tangibility, to the scale. Subsequently, Richins and Dawson (1992) viewed materialism as a value that shapes individuals' perceptions of their environment and guides their life choices. Rather than considering materialism as an attitude or a personality trait, they conceptualized it as a guiding force that places emphasis on cherishing material possessions and acquiring tangible goods to achieve major life goals or gain status. In line with this perspective, Richins and Dawson (1992) developed the Materialism Value Scale (MVS), consisting of 18 items, to assess materialism as a value. The MVS covers materialism across three domains: centrality (C), happiness (H), and success (S). Furthermore, Richins (2004) proposed shorter versions of the materialism scale to improve its dimensional characteristics, enhance psychometric properties, and more accurately measure each domain of materialism.

In our experiment, materialism is considered as a value that negatively influences individuals' SCAs. Therefore, it is deemed more suitable to employ the Materialism Value Scale (MVS), which specifically measures materialism as a value. For research purposes, the original version of the MVS has been shortened by selecting items that align with sustainability. Additionally, only items related to the happiness (H) domain

of materialism were included, as items representing centrality (C) and success (S) were deemed irrelevant for the research context.

Generative Altruism Scale (GALS)

The research defines altruism as "A value system that motivates an individual to engage in pro-social behavior driven by empathy and compassion, without expecting any personal gain in return" (see Section 2.3.2). In line with this definition, Büssing et al. (2013) developed the Generative Altruism Scale (GALS) specifically designed to measure altruism as a value among young adults. The scale considers empathy and compassion as intrinsic motivators of altruism, aligning with the provided definition of altruism. Moreover, the target demographic of the scale matches the selected sample for this research. Given these factors, the GALS was deemed appropriate for measuring altruism value in the research. The original scale consisted of seven items; however, similar to the MVS, the GALS was shortened for the purposes of this study. Further details regarding the rationale for item reduction from the scales will be provided below.

Advantages of using shortened versions of MVS and GALS:

1- Using fewer items for each scale reduces the possibility of losing the potency of the prime effect.
2- Smaller scales hold a little coverage so that the additional concepts or variables can be included into the questionnaires without holding a lot of space.
3- They are easier to hide in the questionnaires.
4- Since examining the materialism and altruisim values of the participants is not the main domain of the research, using the shortened versions of the scales with fewer items give the researcher the opportunity of selecting the most fitting items that would capture the definition of the given values from the original scales.
5- From both scales, items that are compatible with sustainability can be selected.

The identical versions of the scales were used by Yurteri (2021) in two different experiments consecutively in the same manner of this research. The reliability scores of the MVS for two different cases were α= 0.87 and α=0.91 and in the succeeding experiment GALS reliability scores for two different cases were recorded as α= 0.92 and α=0.91 respectively. The items that are used in each scale are demonstrated in Table 4.8 and Table 4.9.

Table 4. 7. The Materialism Value Scale (MVS) Items from the Experiment I

The Shortened Materialism Value Scale	Adapted from Richins and Dawson (1992)
MVS(1)	I would be happier if I could afford to buy more things.
MVS(2)	My life would be better if I owned certain things I do not have.
MVS(3)	It sometimes bothers me very much that I can't afford to buy all the things I'd like.

Table 4. 8. The Generative Altruism Scale (GALS) Items from the Experiment II

The GALS Scale	Adapted from Bussing et al. (2013)
GALS(1)	I help others even when there is no direct benefit to me.
GALS(2)	I am very concerned for the well-being of other people, even if I don't know them personally.
GALS(3)	I can give away my things to someone who needs them more than I do.
GALS(4)	When I see individuals in need, I try to find a way to help them.

4.4.2 The Measure of SCAs

The dependent variable in the experiment was the SCAs of the participants. To measure SCAs, various scales from previous studies were analyzed to construct the most appropriate scale for the experiment. As mentioned in Section 3.2.2, the priming effect has an impact on subsequent attitudes and behaviors, without altering the recall of past behaviors. Therefore, the selected or modified items from previous studies were primarily aimed at measuring the anticipated future behaviors and the changes in participants' environmental cognition.

While developing the SCA scale, it was crucial to encompass all pillars of sustainability, including economic, societal, and environmental dimensions. To achieve this, each item aimed to measure various aspects of sustainability. The dimensions of sustainability were assessed by including items that evaluated environmental responsibility, sustainable consumption practices, willingness to pay for sustainable products, and a sense of responsibility towards social well-being. The SCA scale was created by adapting and modifying items from following studies that focused on measuring similar constructs:

1) Ecologically Conscious Consumer Behavior Scale (ECCB) (Roberts, 1996).

2) GREEN Scale (Haws et al., 2014)

3) Perceived Consumer Effectiveness on Climate Friendly Purchasing Sub-scale (Feucht & Zander, 2017)

4) Socially Responsible Purchases and Disposal Scale (Webb et al., 2008)

The similar SCA scales that either included identical or similar items were used by Berkin (2018), Eşsiz and Mandrik (2022) and Yurteri (2021) in their studies. All the reliability scores of the scales were satisfactory and respectively Berkin (2018) reported the reliability score of α=0.82, Eşsiz and Manfrik (2022) reported α=0.84 and Yurteri

(2021) also achieved Cronbach's Alpha scores ranged between 0.88 to 0.91 for the same scale in two different cases from two consecutive experiments.

Table 4. 9. The Sustainable Consumption Attitudes (SCAs) Scale Items from the Experiments

The SCA Scale	Created based on Feucht and Zander (2017), Haws et al. (2014), Roberts (1996), Webb et al. (2008).
SCAS(1)	I am concerned about wasting the resources of our planet.
SCAS(2)	I will make an effort to use products that do not harm the environment.
SCAS(3)	It is important to change my consumption patterns (use less or avoid buying products) in order to protect the environment.
SCAS(4)	I feel a sense of responsibility for small growers and workers in lower-income countries that produce the things I buy.

CHAPTER 5

RESULTS

5.1 Chapter Summary

The Chapter 5 of the thesis presents the statistical results of the Experiment I and the Experiment II along with the subsequent data interpretations. At the beginning of the chapter, the reliability and the validity analyses of the measurement instruments that are used (i.e. MVS, GALS, SCAS) for the experiments will be provided. The next and the final section of this chapter will hold the information regarding the examination of the research hypotheses by inspecting the statistical difference between independent samples t-test results.

5.2 Analyses of Reliability and Validity

5.2.1 Reliability Analysis

The internal consistency of the research instruments was analyzed using IBM SPSS Statistics 25. Cronbach's alpha scores were computed to assess scale reliabilities for Experiment I and Experiment II, as shown in Table 5.1 below. The results indicate that the MVS used in Experiment I had a Cronbach's alpha score of MVS(α) = 0.787, while the GALS utilized in Experiment II had a score of GALS(α) = 0.829. The reported alpha scores for the SCA scale were SCA(α) = 0.740 for Experiment I and SCA(α) = 0.824 for Experiment II, respectively. According to Nunnally (1978), reliability criteria are met when alpha coefficients exceed 0.70. Since all the reported alpha scores are higher than the 0.70 cut-off point, internal consistency is achieved among the items, and the scales used in the experiments are deemed to be reliable.

Table 5. 1. The Reliability Results for the Experiments

Experimental Condition	N_{items}	α
Experiment I – Materialism (Phrase Unscrambling)		
MVS	3	0.787
SCAS	4	0.740
Experiment II (Paragraph Writing)		
GALS	4	0.829
SCAS	4	0.824

5.2.2 Validity Analysis

The measurement instruments' validity, particularly the scales employed for the constructs, was analyzed by examining their external construct validity through nomological validity. Nomological validity is evaluated by investigating the relationship between the construct of interest and its associated constructs in a study, ensuring that these relationships align with theoretical predictions and replicated claims in the literature (Nunnally, 1978). High nomological validity is achieved when the predictions within a formal theoretical network are supported (Hagger et al., 2017). Before analyzing the nomological validity, Cronbach and Meehl (1955) argued that a nomological network illustrating the integrated lawful relationships of the study's constructs must be established. In Chapter 3 of the thesis, the conceptual framework of the constructs is evaluated through a literature review, and the conceptual model (refer to Section 3.4) is developed by analyzing the relationship between the research variables, aiming to demonstrate the nomological network of the constructs. For the

validity check, IBM SPSS Statistics 25 is utilized, and the results obtained from correlation analyses or independent samples t-tests are compared with previous research that establishes the theoretical network for the constructs in the study. Confirming similar relationships between the collected data and past research would validate the nomological validity of the constructs.

SCA Scale

The nomological validity check was first conducted for the SCA Scale. As discussed earlier, contemporary research indicates a negative association between SCAs and materialism (Hurst et al., 2013; Mai, 2019; Sreen, 2020), while a positive relationship exists between altruism and SCAs (Bautista et al., 2020; Nguyen et al., 2016; Prakash et al., 2019). To determine whether the collected data exhibits these expected relationships, Pearson Correlation coefficients were calculated between the variables. The correlation analysis results for each experiment are presented in Table 5.2 and Table 5.3 below:

Table 5. 2. Bivariate Correlation Results of Experiment I for SCAS and MVS

Correlations	**SCAS**	**MVS**
SCAS	1	-0.381**
MVS	-0.381**	1
****=Correlation is significant at 0.001 level.**		

Table 5. 3. Bivariate Correlation Results of Experiment II for SCAS and GALS

Correlations	**SCAS**	**GALS**
SCAS	1	0.788**
GALS	0.788**	1
****=Correlation is significant at 0.001 level.**		

Based on the results presented in Table 5.2 and 5.3, it can be observed that SCAS negatively correlates with MVS, with a Pearson Correlation coefficient of -0.381. Additionally, there is a strong positive correlation of 0.788 between SCAS and GALS. Both correlations are statistically significant at p=0.001. These findings align with the existing literature, confirming the theoretical network between the constructs and establishing construct validity. The results provide support for the expected relationships between SCAs, materialism, and altruism, further strengthening the nomological validity of the SCAS Scale.

The last validity check that is utilized on SCAS was comparing the difference between means of the demographic variable of gender with respect to SCAs. Although gender was a controlled variable in the study, it is an important indicator that theoretically relates to SCAs. Hence, indicating the relationship between the variables would enhance the nomological validity of the SCAS. The extant literature demonstrates that females hold more SCAs than males (Berenguer et al., 2005; Dagher et al., 2015; Panzone et al., 2016; Zelezny et al., 2000). In the name of testing whether the collected data of males and females differ on their SCAs in a similar manner with the previous literature, the sample data that is gathered for the Experiment I and the Experiment II is combined since both of the experiments included the identical SCAS measure and the independent sample t-test is utilized for the whole sample (see Table 5.4.). The independent sample t-test results indicate that there is a statistical difference between the mean scores of males' SCAs (M=12,04, SD=3,94) and females' SCAs (M=14,43, SD=3,34), t(321) = -5,87, p = 0,000<0,05. Hence, females held more favorable attitudes toward sustainable consumption than males in the study. Once again the results corresponded with the extant literature, and the nomological validity is achieved for the SCAS.

Table 5. 4. Independent Samples T-test results for SCAS According to Gender

Variable	Gender	N	Mean	SD	DF	T	Sig.
SCAS	Male	171	12,0351	3,9391	321	-5,867	0,000
	Female	152	14,4342	3,3369			

Altruism and Materialism Scales

The preceding correlation analysis between the Materialism Value Scale (MVS) and the Generative Altruism Scale (GALS) established the validity of these constructs in relation to the SCAS. However, to enhance the assessment of the MVS and GALS, a supplementary examination was conducted by referencing a prior study that employed identical scales.

Yurteri (2021) conducted Confirmatory Factor Analysis (CFA) to evaluate the construct validity of the MVS and GALS scales in two distinct scenarios and the results exhibited satisfactory psychometric properties. The obtained results from factor loadings signified the validty of the constructs. Additionally, the Average Variance Extracted (AVE) values for both scales in both scenarios demonstrated internal consistency, thus providing further support for the convergent validity of the measures.

In this section, the reliability and validity analyses for the measurement instruments are executed. All of the scales are deemed to be scientifically reliable and valid. This granted the continuation of the data analysis and in the next section results that are obtained from the hypotheses testing are presented.

5.3 Test of Hypotheses

Hypotheses testing is conducted by evaluating the statistical difference of the independent samples t-test results between the experiment group (money group) and the control group (neutral group) of Experiment I and Experiment II respectively. IBM

SPSS Statistics 25 is utilized for analyzing the statistical evidence between the means of the two groups.

5.3.1 Experiment I

The Experiment I executed for testing three hypotheses: Hypothesis 1, Hypothesis 2, and Hypothesis 3. Hypothesis 1 posited that money priming will negatively affect sustainable consumption attitudes. Hypothesis 2 predicted a positive relationship between money priming and materialism, and Hypothesis 3 proposed that materialism will negatively affect SCAs. To investigate these hypotheses, independent samples t-tests were conducted to compare the means of the money group and the neutral group in the experiment.

The independent samples t-test scores revealed that when people are primed with money, their SCAs are significantly dropped (M=11.33, SD=3.52) compared to getting primed with neutral concepts (M=15.54, SD=2.39), t (188) = -9.64, p=0.000<0.05. Furthermore, the results also indicated that money priming increased the materialism value of the participants since the mean score of the MVS was higher in the money group than in the neutral group (MVSmoney =11,93>MVSneutral = 7,99), t (188)=10.20, p=0.000<0.05 and the statistical significance was achieved (see Table 5.7.). Hence, by evaluating the results, it can be said that money priming increases the materialism value and while decreasing the SCAs of the participants which supports hypothesis 1 and 2.

Table 5. 5. Independent Samples T-test Results of the Experiment I between the Money Group and the Neutral Group

Experimental Condition		N	Mean	SD	DF	T	Sig.
SCAS	Money Group	95	11,3263	3,5233	188	-9,637	0,000
	Neutral Group	95	15,5368	2,3915	188		
MVS	Money Group	95	11,9263	2,3167	188	10,203	0,000
	Neutral Group	95	7,9895	2,9625	188		

To test hypothesis 3, the study utilized the median split method to categorize the materialism variable measured on the Materialism Value Scale (MVS). Participants were divided into two groups based on their MVS scores: a "high materialism group" and a "low materialism group." The aim was to examine the differences SCAs scores between these groups, thereby assessing the impact of materialism on SCAs. The median value of the sample was found to be Mdn=10. Participants scoring above 10 were assigned to the high materialism group, while those scoring below 10 were assigned to the low materialism group. Subsequently, an independent samples t-test was conducted to compare the mean SCAs scores between the two groups. The results revealed that the high materialism group (M=12.08, SD=3.88) exhibited significantly lower SCAs scores compared to the low materialism group (M=14.92, SD=2.97), $t(165)=5.41$, $p=0.000<0.05$. This indicates that as participants' materialism values increased, their SCAs decreased, thereby providing support for hypothesis 3 (See Table 5.8.). In summary, the analysis suggests a negative relationship between materialism and SCAs.

Table 5. 6. Independent Samples T-test Results of the Experiment I between the High Materialism Group and the Low Materialism Group

Variable	Group	N	Mean	SD	DF	T	Sig.
SCAS	High Materialism	89	12,0787	3,8824	165	5,414	0,000
	Low Materialism	85	14,9176	2,9969	165		

5.3.2 Experiment II

Experiment II was designed to test three hypotheses: Hypothesis 1, Hypothesis 4, and Hypothesis 5. Hypothesis 1 had already been supported in Experiment I; however, to replicate the result using a different money priming method, Hypothesis 1 was tested again. Hypothesis 4 stated that money priming would decrease altruism, leading to a subsequent decrease in SCAs as proposed in Hypothesis 5. Thus, in contrast to Experiment I, this experiment aimed to examine the effect of money priming on altruism. To test these hypotheses, independent samples t-tests were conducted to compare the means of the money group and the control group. By employing the independent samples t-test, the study examined the differences between the means of the money group and the control group to assess the aforementioned hypotheses.

The Table 5.9. shows the results of the independent samples t-test between the money group and the neutral group which indicates that when people are primed with money their SCAs are significantly dropped (M=10.26, SD=3.67) compared to getting primed with neutral concepts (M=15,50, SD=2,44), t (188)= -9.96, p=0.000<0.05. Moreover, the independent samples t-test scores also indicated that money priming decreased the altruism value of the participants since the mean score of the GALS was lower in the money group than the neutral group (GALSmoney =11,27<GALSneutral = 17,03), t (188)=-10.86, p=0.000<0.05 and the statistical significance was achieved.

According to the results, it could be claimed that money priming decreased the SCAs of the participants while decreasing their altruism value as well. Both phrase unscrambling method and the paragraph writing method were effective money priming methods in terms of putting people in a self-sufficiency state since both of the experiments revealed parallel results as regards to reducing participants' SCAs. Overall, the results of the Experiment II demonstrated that hypotheses 1, and hypothesis 4 are supported.

Table 5. 7. Independent Samples T-test Results of the Experiment II between the Money Group and the Neutral Group

Experimental Condition		N	Mean	SD	DF	T	Sig.
SCAS	Money Group	70	10,2571	3,6700	138	-9,958	0,000
	Neutral Group	70	15,5000	2,4361	138		
GALS	Money Group	70	11,2714	4,0106	138	-10,858	0,000
	Neutral Group	70	17,0286	1,8956	138		

To test Hypothesis 5, the same method used for testing Hypothesis 3, namely the median split method, was employed. This method was applied to categorize the measured altruism value using the Generative Altruism Scale (GALS). The sample's median was determined to be Mdn=15. Consequently, participants scoring higher than 15 were assigned to the "high altruism group," while those scoring lower than 15 on the GALS were assigned to the "low altruism group." The primary objective was to examine the differences of the scores assigned to the SCAS between these groups, thus investigating the impact of altruism on SCAs. To achieve this, an independent samples t-test was conducted to compare the mean scores of the SCA scale between the two groups. The results indicated that the high altruism group (M=15.53, SD=2.40) exhibited significantly higher SCAs scores compared to the low altruism group (M=9.85, SD=3.65), t(104)=-10.56, p=0.000 ($p<0.05$) This indicates that as

participants' altruism value increased, their SCAs increased as well, which supports hypothesis 5 (See Table 5.10.).Overall, the analysis indicates a positive relationship between altruism and SCAs.

Table 5. 8. Independent Samples T-test Results of the Experiment II between the High Altruism Group and the Low Altruism Group

Variable	Group	N	Mean	SD	DF	T	Sig.
SCAS	High Alturism	68	15,5294	2,4031	104	-10,560	0,000
	Low Altruism	62	9,8548	3,6478	104		

CHAPTER 6
DISCUSSION AND CONCLUSION

6.1 Chapter Summary

The last chapter of the thesis begins with the general discussion of the gathered results from the Experiment I and Experiment II. The section also postulates the contributions of the research to the literature and managerial implications. Subsequently, the limitations of the study are presented and research directions for each research caveat are identified. The thesis is completed by the concluding remarks including a brief summary of the organization of the thesis to ease the navigation throughout the study.

6.2 General Discussion

Summary of the Research

The central aim of this research was to address the effects of money priming on sustainable consumption. The results of two consecutive experiments demonstrated that money priming, regardless of the method that is used, causes an alteration in the individual's values which impacts their SCAs. Experiment I indicated that when people are primed with money their materialism value increases which negatively affects their SCAs and Experiment II also showed a negative relationship between money priming and SCAs and a decrease in the altruism value which negatively affected SCAs. Overall all the, proposed hypotheses are tested and supported:

Table 6. 1. Table Showing the Evaluation of Hypotheses

H1: Money priming will negatively affect SCAs.	**Supported**
H2: Money priming will positively affect materialism.	**Supported**
H3: Materialism is negatively related to SCAs.	**Supported**
H4: Money priming will negatively affect altruism.	**Supported**
H5: Altruism is positively related to SCAs.	**Supported**

The findings from Experiment I demonstrated that individuals who primed with money scored lower on the SCA Scale compared to those primed with neutral concepts, thus providing support for H1. Furthermore, money priming was found to increase the materialism value, as individuals scored higher on the MVS after being exposed to money cues, which supported H2. These results in Experiment I also aligned with previous research, supporting H3 and indicating a negative impact of materialism on SCAs. Consistently, the results of Experiment II further supported H1 by demonstrating that even with a different money priming method, individuals primed with money scored lower on the SCA Scale. Additionally, the results of Experiment II revealed that participants primed with money indicated lower scores on the GALS scale, indicating a decrease in their altruism values, thereby providing support for Hypothesis 4. Finally, Experiment II supported Hypothesis 5, contributing to the existing literature by establishing a positive relationship between altruism and SCAs.

Comparison with the Previous Research

As it was also discussed when assessing the nomological validity of the research variables through a correlation analysis, the findings of Experiment I revealed a negative relationship between materialism value and SCAs. The sample in Experiment I was divided into two groups, namely the high materialism group and the low materialism group, using the median split method. Individuals belonging to the high materialism group, scoring above the median, reported lower scores on the SCA Scale compared to participants from the low materialism group. These findings are consistent with prior literature that emphasizes the negative association between materialism value and SCAs (Hurst et al., 2013; Mai, 2019; Richins, 1997; Sreen, 2020).

Furthermore, Experiment II employed the median split method as well to divide the sample into two groups based on their altruism scores: the high altruism group and the low altruism group. The results demonstrated a positive association between altruism and SCAs, as the high altruism group reported significantly higher levels of SCAs compared to the low altruism group. Thus, the findings from Experiment II contribute to the growing body of literature that underscores the positive relationship between altruism value and SCAs (Bautista et al., 2020; Nguyen et al., 2016; Prakash et al., 2019; Schultz & Zelezny; 1999).

Lastly, the findings of the experiments are consistent with the existing literature which stipulates money priming induces a state of self-sufficiency. Both the phrase unscrambling method employed in Experiment I and the paragraph writing method with image representation utilized in Experiment II were effective in altering individuals' values and attitudes. The observed decrease in SCAs and altruism, coupled with an increase in materialism following money priming, suggests that money cues can influence subsequent behaviors by altering people's motivations, as proposed by Vohs et al. (2006).

Interpretation of the Results

The study of the effects of money on individuals and its psychological implications has been explored across various fields. However, research on money priming is still relatively new, as it was only recently discovered by psychological scientists that even the mere concept of money can significantly influence people's values, motivations, attitudes, and their consequent behaviors. This realization is very valuable considering that exposure to money is nearly unavoidable in our daily lives, implying that many of our behaviors may be influenced by these pervasive money cues. Hence, it can be concluded that money possesses an extrinsic influence as well on top of its intrinsic power to shape individuals' behaviors.

This research demonstrates that the mere idea of money has the capacity to increase materialism and decrease altruism in individuals. To the best of our knowledge, this is the first study to reveal the influence of money on these particular values, yielding substantial theoretical implications that will be extensively discussed in the subsequent section. As previously highlighted, materialism and altruism are crucial indicators of SCAs and SCBs. Consequently, the findings of this research not only contribute to the expanding body of knowledge concerning the psychological consequences of money priming but also provide an additional contribution to the existing literature on sustainable consumer behavior.

In this era of pervasive advertising and relentless marketing communications facilitated by advanced technology, it becomes imperative for both scientists and consumers to be cognizant of the underlying reasons driving their behaviors. It is no longer solely the responsibility of marketers to influence consumers and foster sustainable lifestyles. Consumers themselves must possess a clear understanding of the intrinsic factors and external influences shaping their consumption decisions. To delve deeper into this matter, the upcoming section will present a comprehensive analysis of

the contributions to the existing literature, as well as the managerial implications that arise from these findings.

6.3 Contributions to the Literature and Managerial Implications

Theoretical and Scholarly Contributions

The novelty of this research lies in its contribution to filling a gap in the environmental psychology and consumer behavior literature. While sustainable consumer behavior research primarily focuses on enduring antecedent factors that facilitate or hinder sustainable consumption, this study examines the transient effects of money on sustainable consumption attitudes. The research demonstrates that even one of the most prominent environmental cues in everyday life, namely money, can have significant negative effects on individuals' SCAs. The findings reveal that money priming increases materialism and reduces altruism, leading to a decrease in SCAs. Therefore, the research not only expands the existing literature by identifying hindering factors of sustainable consumption and revealing additional effects of money priming, but also suggests that sustainable consumption behavior is not solely dependent on consumers' internal decision-making processes. External stimuli, such as money, can also influence their behavior.

The results of the experiments contribute to the validation of previous literature by confirming the negative relationship between materialism and SCAs, as well as the positive relationship between altruism and SCAs. However, the main contribution of this research is showing altruism and materialism values as intermediary factors between money priming and SCAs which is a novel contribution to the litereture. As discussed earlier, the previous and the only analysis of the relationship between money priming and willingness to engage in sustainable behavior in the literature have yielded inconsistent results between the samples, and the scale used in the study did not specifically measure the sustainable consumption attitudes of consumers (Capaldi &

Zelenski, 2016). Therefore, the literature lacked a comprehensive assessment of the relationship between money priming and SCAs. In adressing this gap, the present research provides valuable insights by elucidating the relationship between money priming and SCAs through the impacts of specific values.

It is also important for researchers to note that the five-point Likert scales used in the research (MVS, SCAS, and GALS) have been validated by assessing their nomological validity, and the items within each scale have been determined to be internally consistent through a reliability analysis. The reliability statistics demonstrated that the Cronbach's Alpha scores for SCAS, which consisted of four items from previous sustainable consumption attitude scales in the literature (refer to Section 4.4.3 for detailed information), were 0.74 for Experiment I and 0.82 for Experiment II. Additionally, the alpha results for MVS in Experiment I were 0.79, and for GALS in Experiment II were 0.83, indicating that all scales were deemed reliable. These findings provide researchers aiming to study the same constructs as the current research with the opportunity to utilize the same scales.

Managerial Implications

In addition to theoretical and scholarly contributions, it is important to highlight the managerial implications of this research. The findings from the experiments indicate that money cues and symbols can act as a barrier to sustainable consumption, and it is crucial for marketers to consider this when designing their communication strategies with consumers. Although the duration of the effect of money priming is uncertain, it is evident that the immediate impact on subsequent behaviors is significant after exposure to the stimulus. Therefore, marketers should particularly focus on not using indications of money on advertisements and communication strategies targeted at consumers who are at the premises of green products.

The findings of this research can also assist marketers in adopting more effective green marketing strategies. The results suggest that altruism and materialism are significant variables that affect SCAs. As a result of money priming, materialism value

might increase, and altruism value might decrease, which negatively affects SCAs. Hence, marketers could implement green marketing strategies that either activate the altruistic value of their customer segment or reduce the emphasis on materialism value. It is important for marketers to acknowledge the substantial impact of money reminders on these values when creating their marketing messages, advertisements, and enticing techniques to attract consumers. For instance, green marketing strategies aiming to evoke the altruistic values of their customer segment should avoid using money cues or symbols in their marketing communications, as priming individuals with money may heighten their materialism values while diminishing their altruistic inclinations. This, in turn, can have a negative impact on their SCAs.

6.4 Limitations and Recommendations for Future Research Directions

Before concluding the thesis, the research limitations of the study will be discussed, and corresponding future research recommendations will be provided to encourage further investigation in the field.

First and foremost, it is important to highlight that the sample used for both experiments consisted of METU NCC University students, mostly ranging in age from 20 to 25. Additionally, there was a difference in sample sizes between the experiments (NexpI = 190, NexpII = 140). However, the difference in sample sizes was not a limitation, as both experiments aimed to measure the effects of different independent variables on SCAs, and statistical significance was achieved among the means of the groups in both experiments. It is worth noting that sample sizes ranging from 30 to 500 are generally considered adequate for the majority of studies, although increasing the sample size can yield more accurate results and a more normal distribution (Saunders et al., 2011). Furthermore, enhancing the generalizability of the research could be achieved by replicating the experiments in different populations. Given the potential limitations of language barriers and conducting the study only on the university students, further research could replicate these experiments or conduct similar ones

with participants from different cultures and age groups to observe the effects of money priming on sustainable consumption in diverse populations.

As mentioned earlier, the SCA Scale, which is adapted to measure the sustainable consumption attitudes of participants, aims to assess their intention towards engaging in certain behaviors rather than measuring the actual behavior itself. While intention to participate in a specific behavior is generally considered a satisfactory prerequisite for performing that behavior, actual behavior may not always align with behavioral intention (Chen & Tung, 2014). Therefore, a future field experiment could be conducted to measure the effectiveness of money priming on the actual behavior of participants. Such a study would contribute to the literature by examining the attitude-behavior gap among consumers who are primed with money.

Another limitation of the study that should be discussed, despite being a potential limitation, is the presence of social desirability bias. Although the outcomes of the experiments provided satisfactory support for the research hypotheses, it is important to acknowledge that some of the responses given by participants may have been influenced by social desirability bias. Social desirability bias occurs when participants select responses on a questionnaire that are socially acceptable and favorable (Grimm, 2010). It is recommended that, when applicable, a social desirability scale be implemented in the questionnaires to assess the impact of social desirability on the research (Nederhof, 1985). In the current study, the decision was made not to include a social desirability bias scale as a measure because its inclusion could potentially weaken the effect of money priming on the dependent measures. Participants were already presented with a combination of two scales (SCAS and MVS for Experiment I, SCAS and GALS for Experiment II) following the money priming manipulation in both experiments. However, a future study could consider using a different approach to measure participants' SCAs, altruism, or materialism values, and include a social desirability scale to mitigate the potential over-reporting or under-reporting of responses given.

Finally, another potential limitation may be the participants' lack of knowledge regarding sustainable lifestyles. As mentioned earlier, environmental knowledge is one of the factors influencing sustainable consumption, and it is positively related to it (Lin & Niu, 2018; Pagiaslis & Krontalis, 2014; Zsoka et al., 2013). Furthermore, the current research assumes that the selected samples for both experiments are familiar with sustainable living and environmentally conscious. However, students from the 'Sustainable Environment and Energy Systems' department may possess more extensive knowledge about sustainable consumption practices compared to students from the 'Computer Engineering' department. In order to avoid sampling bias, the experiments were conducted on students from random departments without receiving information about their backgrounds. However, there is still a possibility that the majority of selected students may not possess the level of sustainable consciousness expected from them, although this did not reflect in the results (or perhaps it decreased the possibility of obtaining more accurate results). Future researchers should consider this limitation before conducting their experiments and should carefully select their samples.

6.5 Concluding Remarks

"Money often costs too much" - (Emerson 2022).

Money is a predominant and omnipresent aspect of our current lives. It is extremely difficult to avoid encountering its physical presence or some kind of indication related to it on a daily basis. The research on the effect of money on human behavior is still a fairly understudied field, and it deserves greater scrutiny within the realm of science. This study aimed to examine the effect of money on one of the most crucial human behavior paradigms: the sustainable consumption. Given the global temperature increase and climate change, widespread behavior change has become a necessity, as unsustainable human behavior significantly contributes to contemporary environmental issues. Thus, this research seeks to expand the literature by identifying an additional element that hinders SCAs and SCBs. The current research demonstrates that even the mere idea of money can influence people's thoughts, affect their values, and alter their attitudes. It is not surprising that the pursuit and greed for money have led to many environmental problems. However, the study results indicate that money can even prompt unsustainability by influencing our implicit memory. It is my hope that marketers, policymakers, and interested parties pay attention to the findings of this study and shape their initiatives accordingly. Furthermore, I encourage academics to delve deeper into this area of research by replicating the results or investigating the additional effects of money on sustainability.

The Navigation through the Thesis

The first chapter of the thesis consists of the 'Introduction' section, which provides relevant background information on the research. Within the introduction chapter, the research gaps and objectives are presented, along with a statement of the main research problem. The next chapter is dedicated to the 'Literature Review' of the research variables and their theoretical relationships. The conceptual framework and research hypotheses are formulated in the third chapter of the thesis, which also includes the conceptual model. Subsequently, chapter four presents the 'Methodology' of the research, covering the data collection methods and the experimental design for the pretests, Experiment I, and Experiment II. The results of the experiments are shared in chapter 5, followed by the 'Discussion and Conlusion' of the results in the final chapter of the thesis.

REFERENCES

Adams, B. (2019). *Green development: Environment and Sustainability in a Developing World*. Routledge.

Aghakhani, H., Akhgari, M., & Main, K. (2019). When does money priming affect helping behavior?. *Australasian Marketing Journal (AMJ)*, *27*(1), 32-40.

Ahmad, J., Noor, S. M., & Ismail, N. (2015). Investigating students' environmental knowledge, attitude, practice and communication. *Asian Social Science*, *11*(16), 284.

Ajzen, I. (1980). Understanding attitudes and predictiing social behavior. *Englewood Cliffs*.

Ajzen, I. (1985). *From intentions to actions: A theory of planned behavior* (pp. 11-39). Springer Berlin Heidelberg.

Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. In *Advances in experimental social psychology* (Vol. 20, pp. 1-63). Academic Press.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-211.

Ajzen, I. (2012). Values, attitudes, and behavior. *Methods, Theories, and Empirical Applications in the Social Sciences*, 33-38.

Alam, S. S., Ahmad, M., Ho, Y. H., Omar, N. A., & Lin, C. Y. (2020). Applying an extended theory of planned behavior to sustainable food consumption. *Sustainability*, *12*(20), 8394.

Alcañiz, M., Giglioli, I. A. C., Carrasco-Ribelles, L. A., Minissi, M. E., López, C. G., & Semin, G. R. (2023). How priming with body odors affects decision speeds in consumer behavior. *Scientific Reports*, *13*(1), 1-9.

Ali, I., & Mandurah, S. (2016). The role of personal values and perceived social support in developing socially responsible consumer behavior. *Asian Social Science*, *12*(10), 180-189.

Anuar, M. M., Omar, K., Ahmed, Z. U., Saputra, J., & Yaakop, A. Y. (2020). Drivers of green consumption behaviour and their implications for management. *Polish Journal of Management Studies*, *21*.

Argyle, M., & Furnham, A. (1998). *The psychology of money*. Routledge.

Aurelius, M. (1894). *The Meditations of Marcus Aurelius* (Vol. 3). Routledge

Axelrod, R., & Hamilton, W. D. (1981). The evolution of cooperation. *Science*, *211*(4489), 1390-1396**.**

Ayar, I., & Gürbüz, A. (2021). Sustainable consumption intentions of consumers in Turkey: a research within the theory of planned behavior. *SAGE Open*, *11*(3), 21582440211047563.

Bagozzi, R. P., Ruvio, A. A., & Xie, C. (2020). The material self. *International Journal of Research in Marketing*, *37*(4), 661-677.

Balderjahn, I., Buerke, A., Kirchgeorg, M., Peyer, M., Seegebarth, B., & Wiedmann, K. P. (2013). Consciousness for sustainable consumption: scale development and new insights in the economic dimension of consumers' sustainability. *AMS Review*, *3*(4), 181-192.

Banerjee, B., & McKeage, K. (1994). How green is my value: exploring the relationship between environmentalism and materialism. *ACR North American Advances*.

Bar, T. D.(1976). Prosocial Behavior: Theory and Research. *New York: Halsted Press*, *22*, 183-197.

Barbarossa, C., & De Pelsmacker, P. (2016). Positive and negative antecedents of purchasing eco-friendly products: A comparison between green and non-green consumers. *Journal of Business Ethics*, *134*(2), 229-247.

Barber, N. A. (2014). Profiling the potential "green" hotel guest: Who are they and what do they want?. *Journal of Hospitality & Tourism Research*, *38*(3), 361-387.

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.

Bar-Tal, D. (1986). Altruistic motivation to help: Definition, utility and operationalization. *Humboldt Journal of Social Relations*, 3-14.

Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation?. *Journal of Personality and Social Psychology*, *40*(2), 290..

Bautista, R., Dui, R., Jeong, L. S., & Paredes, M. P. (2020). Does altruism affect purchase intent of green products? A moderated mediation analysis. *Asia-Pacific Social Science Review*, *20*(1), 159-170.

Belk, R. W. (1985). Materialism: Trait aspects of living in the material world. *Journal of Consumer Research*, *12*(3), 265-280.

Berenguer, J., Corraliza, J. A., & Martin, R. (2005). Rural-urban differences in environmental concern, attitudes, and actions. *European Journal of Psychological Assessment*, *21*(2), 128.

Bergman, J. Z., Westerman, J. W., Bergman, S. M., Westerman, J., & Daly, J. P. (2014). Narcissism, materialism, and environmental ethics in business students. *Journal of Management Education, 38*(4), 489-510.

Berkin, A. (2018). *Cross-national examination of cultural values, belief systems and sustainable consumer attitudes and behaviours* (Master's thesis, Middle East Technical University).

Bermeitinger, C. (2016). Priming. In *Psychology and Mental Health: Concepts, Methodologies, Tools, and Applications* (pp. 42-88). IGI Global.

Bernard-Rau, B., & Schnerring, G. (2022). F von Fairtrade bis Fuß der Pyramide. In *Gabler Kompakt-Lexikon Corporate Social Responsibility* (pp. 41-42). Wiesbaden: Springer Fachmedien Wiesbaden.

Bhatia, V. (2019). Impact of fashion interest, materialism and internet addiction on e-compulsive buying behavior of apparel. *Journal of Global Fashion Marketing*, *10*(1), 66-80.

Bierhoff, H. W. (2002). *Prosocial Behaviour*. Psychology Press.

Bimonte, S., Bosco, L., & Stabile, A. (2020). Nudging pro-environmental behavior: evidence from a web experiment on priming and WTP. *Journal of Environmental Planning and Management*, *63*(4), 651-668.

Black, I. (2010). Sustainability through anti-consumption. *Journal of Consumer Behaviour*, *9*(6), 403-411.

Bonini, S., & Oppenheim, J. (2008). Cultivating the green consumer. *Stanford Social Innovation Review*, *6*(4), 56-61.

Boucher, H. C., & Kofos, M. N. (2012). The idea of money counteracts ego depletion effects. *Journal of Experimental Social Psychology*, *48*(4), 804-810.

Braungart, M., & McDonough, W. (2009). *Cradle to cradle*. Random House.

Broda, A. S. (2019). *The impact of money priming on team-performance, and self-concept* (Doctoral dissertation).

Brothers, K. J., Krantz, P. J., & McClannahan, L. E. (1994). Office paper recycling: A function of container proximity. *Journal of Applied Behavior Analysis*, *27*(1), 153-160.

Brough, A. R., Wilkie, J. E., Ma, J., Isaac, M. S., & Gal, D. (2016). Is eco-friendly unmanly? The green-feminine stereotype and its effect on sustainable consumption. *Journal of Consumer Research*, *43*(4), 567-582.

Brundtland, G. H. (1994). The challenge of sustainable development and consumption patterns. In *Sustainable consumption. Symposium Report of the Ministry of Environment. Oslo*.

Burks, D. J., Youll, L. K., & Durtschi, J. P. (2012). The empathy-altruism association and its relevance to health care professions. *Social Behavior and Personality: An International Journal*, *40*(3), 395-400.

Burroughs, J. E., & Rindfleisch, A. (2002). Materialism and well-being: A conflicting values perspective. *Journal of Consumer Research*, *29*(3), 348-370.

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.

Calman, K. C. (2004). Evolutionary ethics: can values change. *Journal of Medical Ethics*, *30*(4), 366-370.

Campbell, D. T. (1969). Various social attitude scales. *Measures of Political Attitudes*, 648-653.

Capaldi, C. A., & Zelenski, J. M. (2016). Seeing and being green? The effect of money priming on willingness to perform sustainable actions, social connectedness, and prosociality. *The Journal of Social Psychology*, *156*(1), 1-7.

Čapienė, A., Rūtelionė, A., & Krukowski, K. (2022). Engaging in Sustainable Consumption: Exploring the Influence of Environmental Attitudes, Values, Personal Norms, and Perceived Responsibility. *Sustainability, 14*(16), 10290.

Carlson, R. W., Aknin, L. B., & Liotti, M. (2016). When is giving an impulse? An ERP investigation of intuitive prosocial behavior. *Social Cognitive and Affective Neuroscience*,
11(7), 1121–1129

Carr, H. L., & Vignoles, V. L. (2011). Keeping up with the Joneses: Status projection as symbolic self-completion. *European Journal of Social Psychology, 41*(4), 518-527.

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.

Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2014). Lost in translation: Exploring the ethical consumer intention–behavior gap. *Journal of Business Research, 67*(1), 2759-2767.

Caruso, E. M., Shapira, O., & Landy, J. F. (2017). Show me the money: A systematic exploration of manipulations, moderators, and mechanisms of priming effects. *Psychological Science, 28*(8), 1148-1159.

Chartrand, T. L., & Jefferis, V. E. (2004). Priming. *The SAGE Encyclopedia of Social Science Research Methods, 2*, 854-855.

Chen, M. F., & Tung, P. J. (2014). Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management, 36*, 221-230.

Clark, M. S. (2011). Communal relationships can be selfish and give rise to exploitation. In R. M. Arkin (Ed.), *Most underappreciated: 50 prominent social psychologists describe their most unloved work* (pp. 77–81). Oxford University Press.

Cleveland, M., Robertson, J. L., & Volk, V. (2020). Helping or hindering: Environmental locus of control, subjective enablers and constraints, and pro-environmental behaviors. *Journal of Cleaner Production*, *249*, 119394.

Costa, T., Ramos, H., Vils, L., & Cunha, J. (2021). Are Altruists Environmentally Responsible and Materialists Environmentally Irresponsible? An Analysis on the Moderation of Social Desirability and Mediation of Environmental Awareness. *Brazilian Business Review*, *18* (5), 585-604.

Crane, A. (2000). Facing the backlash: green marketing and strategic reorientation in the 1990s. *Journal of Strategic Marketing*, *8*(3), 277-296.

Crilly, D., Schneider, S. C., & Zollo, M. (2008). Psychological antecedents to socially responsible behavior. *European Management Review*, *5*(3), 175-190.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, *52*(4), 281.

Dagher, G., Itani, O., & Kassar, A. N. (2015). The impact of environment concern and attitude on green purchasing behavior: Gender as the moderator. *Contemporary Management Research*, *11*(2).

Davis, J. J. (1993). Strategies for environmental advertising. *Journal of Consumer Marketing*.

de Groot, J. I., & Thøgersen, J. (2018). Values and pro-environmental behaviour. *Environmental Psychology: An Introduction*, 167-178.

Delmas, M. A, & Grant, L. E. (2008). Eco-Labeling Strategies: The Eco-Premium Puzzle in the Wine Industry. *UC Santa Barbara: Institute for Social, Behavioral, and Economic Research*. Retrieved from https://escholarship.org/uc/item/4qv7c61b

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review, 54*(1), 64-87.

Dembkowski, S., & Hanmer-Lloyd, S. (1994). The environmental value-attitude-system model: A framework to guide the understanding of environmentally-conscious consumer behaviour. *Journal of Marketing Management,* 10(7), 593-603.

Desa, U. N. (2016). Transforming our world: The 2030 agenda for sustainable development. *United Nations: New York, NY, USA*.

Dietz, T., Kalof, L., & Stern, P. C. (2002). Gender, values, and environmentalism. *Social Science Quarterly, 83*(1), 353-364.

Dietz, T., Stern, P. C., & Guagnano, G. A. (1998). Social structural and social psychological bases of environmental concern. *Environment and Behavior*, *30*(4), 450-471.

Dittmar, H., & Isham, A. (2022). Materialistic value orientation and wellbeing. *Current Opinion in Psychology*, 101337.

Doppelt, B. (2012). *The power of sustainable thinking: How to create a positive future for the climate, the Planet, your organization and your life*. Routledge.

Doyle, K. O. (1992). Toward a psychology of money. *American Behavioral Scientist*, *35*(6), 708-724.

Dunlap, R. E., & Van Liere, K. D. (1978). The "new environmental paradigm". *The Journal of Environmental Education, 9*(4), 10-19.

Durkin, K. F., Wolfe, T. W., & Clark, G. (1999). Social bond theory and binge drinking among college students: A multivariate analysis. *College Student Journal*, *33*, 450-462.

Durnford EC. Catholic *Morality ... Selected Sayings and Some Account of Various Religions.* London: Jarrold & Sons; 1915.

Dursun, I., Kabadayi, E. T., & Tuger, A. T. (2017, September). Application of Value-Belief-Norm theory to responsible post consumption behaviors: Recycling and reuse. In

Proceedings of the International Congress of the New Approaches and Technologies for Sustainable Development, Isparta, Turkey (pp. 21-24).

Eagly, A. H., & Chaiken, S. (1993). *The Psychology of Attitudes*. Harcourt Brace Jovanovich College Publishers.

Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, *101*(1), 91.

Ekici, A., Shiri, A., & Mandrik, C. A. (2019). " The message in the box: How exposure to money affects charitable giving": Correction.

Ekins, P. (1991). A Sustainable consumer society: A contradiction in terms?. *International Environmental Affairs*, *3*(4), 243-258.

Elgendi, M., Kumar, P., Barbic, S., Howard, N., Abbott, D., & Cichocki, A. (2018). Subliminal priming—state of the art and future perspectives. *Behavioral Sciences*, *8*(6), 54.

Emerson, R. W. (2022). *The Collected Works of Ralph Waldo Emerson*. DigiCat.

Essiz, O., & Mandrik, C. (2022). Intergenerational influence on sustainable consumer attitudes and behaviors: Roles of family communication and peer influence in environmental consumer socialization. *Psychology & Marketing*, *39*(1), 5-26.

Essiz, O., Yurteri, S., Mandrik, C., & Senyuz, A. (2022). Exploring the Value-Action Gap in Green Consumption: Roles of Risk Aversion, Subjective Knowledge, and Gender Differences. *Journal of Global Marketing*, 1-26.

Eurobarometer, F. (2009). Europeans' attitudes towards the issue of sustainable consumption and production. *Flash Eurobarometer*, *256*, 1-18.

Feigin, S., Owens, G., & Goodyear-Smith, F. (2014). Theories of human altruism: A systematic review. *Annals of Neuroscience and Psychology*, *1*(1), 1-9.

Ferguson, M. A., Branscombe, N. R., & Reynolds, K. J. (2011). The effect of intergroup comparison on willingness to perform sustainable behavior. *Journal of Environmental Psychology*, *31*(4), 275-281.

Feucht, Y., & Zander, K. (2017). Consumers' willingness to pay for climate-friendly food in European countries. *Proceedings in Food System Dynamics*, 360-377.

Finisterra do Paço, A. M., Barata Raposo, M. L., & Filho, W. L. (2009). Identifying the green consumer: A segmentation study. *Journal of Targeting, Measurement and Analysis for Marketing*, *17*, 17-25.

Finkelstein, M. A. (2010). Individualism/collectivism: Implications for the volunteer process. *Social Behavior and Personality: An International Journal*, *38*(4), 445-452.

Fischer, D., Böhme, T., & Geiger, S. M. (2017). Measuring young consumers' sustainable consumption behavior: Development and validation of the YCSCB scale. *Young Consumers*.

Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research. *Philosophy and Rhetoric*, *10*(2).

Frank-Martin, B., & Peattie, K. J. (2009). *Sustainability Marketing: A Global Perspective*. Wiley.

Fransen, M. L., Fennis, B. M., Pruyn, A. T. H., & Das, E. (2008). Rest in peace? Brand-induced mortality salience and consumer behavior. *Journal of Business Research*, *61*(10), 1053-1061.

Freyling, V., Brekke, K., Arikan, Y., & Zimmermann, M. (2015). The importance of all Sustainable Development Goals (SDGs) for cities and communities. *ICLEI BRIEFING SHEET–Urban Issues, 4*.

Gandullia, L., Lezzi, E., Parciasepe, P., & Siri, L. (2021). Altruism and structure of values: An experimental investigation. *Journal of Interdisciplinary Economics*, *33*(1), 103-129.

Gao, Z. Y., & Liu, D. D. (2014). Empirical analysis of structural equation on pro-environmental behaviors. In *Advanced Materials Research* (Vol. 955, pp. 1508-1513). Trans Tech Publications Ltd.

Gąsiorowska, A., & Hełka, A. (2012). Psychological consequences of money and money attitudes in dictator game. *Polish Psychological Bulletin*, (1).

Gasiorowska, A., Chaplin, L. N., Zaleskiewicz, T., Wygrab, S., & Vohs, K. D. (2016). Money cues increase agency and decrease prosociality among children: Early signs of market-mode behaviors. *Psychological Science*, *27*(3), 331-344.

Gatersleben, B., White, E., Abrahamse, W., Jackson, T., & Uzzell, D. (2010). Values and sustainable lifestyles. *Architectural Science Review*, *53*(1), 37-50.

Ger, G. (1990). Measuring and comparing materialism cross-culturally. *ACR North American Advances*.

Gilg, A., Barr, S., & Ford, N. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures*, *37*(6), 481-504.

Gino, F., & Mogilner, C. (2014). Time, money, and morality. *Psychological Science*, *25*(2), 414-421.

Goldberg, H., & Lewis, R. T. (2000). *Money madness: The psychology of saving, spending, loving, and hating money*. Wellness Institute, Inc..

Grimm, P. (2010). Social desirability bias. *Wiley International Encyclopedia of Marketing*.

Guagnano, G. A., Stern, P. C., & Dietz, T. (1995). Influences on attitude-behavior relationships: A natural experiment with curbside recycling. *Environment and Behavior*, *27*(5), 699-718.

Haddock, G., & Maio, G. R. (2008). Attitudes: Content, structure and functions. *Introduction to Social Psychology: A European Perspective*, 112-133.

Hagger, M. S., Gucciardi, D. F., & Chatzisarantis, N. L. (2017). On nomological validity and auxiliary assumptions: The importance of simultaneously testing effects in social cognitive theories applied to health behavior and some guidelines. *Frontiers in psychology*, *8*, 1933.

Haider, M., Shannon, R., & Moschis, G. P. (2022). Sustainable consumption research and the role of marketing: a review of the literature (1976–2021). *Sustainability*, *14*(7), 3999.

Hanss, D., & Doran, R. (2020). Perceived consumer effectiveness. *Responsible Consumption and Production*, 535-544.

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.

Hickel, J., O'Neill, D. W., Fanning, A. L., & Zoomkawala, H. (2022). National responsibility for ecological breakdown: a fair-shares assessment of resource use, 1970–2017. *The Lancet Planetary Health*, *6*(4), e342-e349.

Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychological Review*, *94*(3), 319.

Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of Environmental Education*, *18*(2), 1-8.

Hirschi, T. (1969). *Causes of Delinquency*. Berkeley: University of California Press.

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, *2*(1), 2307-0919.

Holmes, J. G., Miller, D. T., & Lerner, M. J. (2002). Committing altruism under the cloak of self-interest: The exchange fiction. *Journal of Experimental Social Psychology*, *38*(2), 144-151.

Homer, P. M., & Kahle, L. R. (1988). A structural equation test of the value-attitude-behavior hierarchy. *Journal of Personality and Social Psychology, 54*(4), 638.

Hopkins, R. A., & Powers, T. L. (2015). The theory of altruism and consumer behavior: literature review and model development. In *Proceedings of the 1996 Multicultural Marketing Conference* (pp. 339-344). Springer International Publishing.

Hosta, M., & Zabkar, V. (2021). Antecedents of environmentally and socially responsible sustainable consumer behavior. *Journal of Business Ethics*, *171*(2), 273-293.

Hultman, M., Kazeminia, A., & Ghasemi, V. (2015). Intention to visit and willingness to pay premium for ecotourism: The impact of attitude, materialism, and motivation. *Journal of Business Research, 68*(9), 1854-1861.

Hume, M. (2010). Compassion without action: Examining the young consumers consumption and attitude to sustainable consumption. *Journal of World Business, 45*(4), 385-394.

Hundhammer, T., & Mussweiler, T. (2012). How sex puts you in gendered shoes: sexuality-priming leads to gender-based self-perception and behavior. *Journal of Personality and Social Psychology*, *103*(1), 176.

Hurst, M., Dittmar, H., Bond, R., & Kasser, T. (2013). The relationship between materialistic values and environmental attitudes and behaviors: A meta-analysis. *Journal of Environmental Psychology*, *36*, 257-269.

Jackson, T. (2005). Motivating sustainable consumption. *Sustainable Development Research Network*, *29*(1), 30-40.

Jain, S. K., & Kaur, G. (2006). Role of socio-demographics in segmenting and profiling green consumers: an exploratory study of consumers in India. *Journal of International Consumer Marketing*, *18*(3), 107-146.

Jaiswal, D., & Singh, B. (2018). Toward sustainable consumption: Investigating the determinants of green buying behaviour of Indian consumers. *Business Strategy & Development*, *1*(1), 64-73.

Jiang, Y., Chen, Z., & Wyer Jr, R. S. (2014). Impact of money on emotional expression. *Journal of Experimental Social Psychology*, *55*, 228-233.

Johansson-Stenman, O. (1998). The importance of ethics in environmental economics with a focus on existence values. *Environmental and Resource Economics*, *11*(3), 429-442.

Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic perspectives*, *5*(1), 193-206.

Karp, D. G. (1996). Values and their effect on pro-environmental behavior. *Environment and Behavior*, *28*(1), 111-133.

Kasser, T. (2005). Frugality, generosity, and materialism in children and adolescents. In *What do children need to flourish?* (pp. 357-373). Springer, Boston, MA.

Kasser, T. (2016). Materialistic values and goals. *Annual Review of Psychology*, *67*(1), 489-514.

Khalid, A., & Qadeer, F. (2017). *Rising Consumer Materialism: A Threat to Sustainable Happiness*. Routledge.

Khaola, P. P., Potiane, B., & Mokhethi, M. (2014). Environmental concern, attitude towards green products and green purchase intentions of consumers in Lesotho. *Ethiopian Journal of Environmental Studies and Management*, *7*(4), 361-370.

Kilbourne, W., & Pickett, G. (2008). How materialism affects environmental beliefs, concern, and environmentally responsible behavior. *Journal of Business Research*, *61*(9), 885-893.

Kim, E., Manchiraju, S., May, R., & Fincham, F. (2016, November). The Correlates between Positive Emotions/Attributes and Sustainable Fashion Consumption Behaviors. In *International Textile and Apparel Association Annual Conference Proceedings* (Vol. 73, No. 1). Iowa State University Digital Press.

Kim, H. (2016). Dual Effect of Money Priming. *Available at SSRN 2883050*.

Kim, H. J. (2017). Diverging influences of money priming on choice: The moderating effect of consumption situation. *Psychological Reports*, *120*(4), 695-706.

Kim, J. (2017). *Lonely Consumers: When, How, and Why Does Loneliness Influence Consumer Behavior?* (Doctoral dissertation, Virginia Tech).

Kish-Gephart, J. J., Harrison, D. A., & Treviño, L. K. (2010). Bad apples, bad cases, and bad barrels: meta-analytic evidence about sources of unethical decisions at work. *Journal of Applied Psychology*, *95*(1), 1.

Knafo, A., Roccas, S., & Sagiv, L. (2011). The value of values in cross-cultural research: A special issue in honor of Shalom Schwartz. *Journal of Cross-cultural Psychology*, *42*(2), 178-185.

Kollmuss, A., & Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior?. *Environmental Education Research*, *8*(3), 239-260.

Kouchaki, M., Smith-Crowe, K., Brief, A. P., & Sousa, C. (2013). Seeing green: Mere exposure to money triggers a business decision frame and unethical outcomes. *Organizational Behavior and Human Decision Processes*, *121*(1), 53-61.

Kusmantini, T., Sutiono, H., Astuti, R. D., & Ekawati, T. (2021). Antecedents of Green Consumption Attitudes and Consequences for Intentions and Buying Behavior of Non-Pesticide Vegetable and Fruit Products. *Antecedents of Green Consumption Attitudes and Consequences for Intentions and Buying Behavior of Non-Pesticide Vegetable and Fruit Products*, *12*(1 (49)), 420-428.

Lander, L. (2018). The good life versus consumerism and greed: reaching a better understanding of barriers and motivators for sustainability. *Sustainability: The Journal of Record*, *11*(2), 65-73.

Landon, A. C., Woosnam, K. M., & Boley, B. B. (2018). Modeling the psychological antecedents to tourists' pro-sustainable behaviors: An application of the value-belief-norm model. *Journal of Sustainable Tourism*, *26*(6), 957-972.

Le Grand, J., Roberts, J., & Chandra, G. (2021). Buying for good: Altruism, ethical consumerism and social policy. *Social Policy & Administration*, *55*(7), 1341-1355.

Lee, B. X., Kjaerulf, F., Turner, S., Cohen, L., Donnelly, P. D., Muggah, R., ... & Gilligan, J. (2016). Transforming our world: implementing the 2030 agenda through sustainable development goal indicators. *Journal of public health policy*, *37*(1), 13-31.

Leonidou, L. C., Leonidou, C. N., & Kvasova, O. (2010). Antecedents and outcomes of consumer environmentally friendly attitudes and behaviour. *Journal of Marketing Management*, *26*(13-14), 1319-1344.

Lestari, E. R., Hanifa, K. P. U., & Hartawan, S. (2020, June). Antecedents of attitude toward green products and its impact on purchase intention. In *IOP Conference Series: Earth and Environmental Science* (Vol. 515, No. 1, p. 012073). IOP Publishing.

Lin, S. T., & Niu, H. J. (2018). Green consumption: E nvironmental knowledge, environmental consciousness, social norms, and purchasing behavior. *Business Strategy and the Environment*, *27*(8), 1679-1688.

Lind, H. B., Nordfjærn, T., Jørgensen, S. H., & Rundmo, T. (2015). The value-belief-norm theory, personal norms and sustainable travel mode choice in urban areas. *Journal of Environmental Psychology*, *44*, 119-125.

Liobikienė, G., & Poškus, M. S. (2019). The importance of environmental knowledge for private and public sphere pro-environmental behavior: modifying the value-belief-norm theory. *Sustainability*, *11*(12), 3324.

Liobikienė, G., Mandravickaitė, J., & Bernatonienė, J. (2016). Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study. *Ecological Economics*, *125*, 38-46.

Liu, X., Wang, C., Shishime, T., & Fujitsuka, T. (2012). Sustainable consumption: Green purchasing behaviours of urban residents in China. *Sustainable Development*, *20*(4), 293-308.

Loh, H. S., Gaur, S. S., & Sharma, P. (2021). Demystifying the link between emotional loneliness and brand loyalty: Mediating roles of nostalgia, materialism, and self-brand connections. *Psychology & Marketing*, *38*(3), 537-552.

Loureiro, A., & Lima, M. L. (2019). Energy-saving behavior: the different roles of altruism and of environmentalism. *Universitas Psychologica*, *18*(1), 1-12.

Lu, L. C., & Lu, C. J. (2010). Moral philosophy, materialism, and consumer ethics: An exploratory study in Indonesia. *Journal of Business Ethics*, *94*(2), 193-210.

Luchs, M. G., & Mooradian, T. A. (2012). Sex, personality, and sustainable consumer behaviour: Elucidating the gender effect. *Journal of Consumer Policy*, *35*(1), 127-144.

Ma, L., Fang, Q., Zhang, J., & Nie, M. (2017). Money priming affects consumers' need for uniqueness. *Social Behavior and Personality: An International Journal*, *45*(1), 105-114.

MacAskill, W. (2017). Effective altruism: introduction. *Essays in Philosophy*, *18*(1), 1-5.

Macdonald, C. (2019). Money, a disconnecting agent: Reminders of money trigger a feeling of disconnection which increases the likelihood of unethical decisions. *Open Science Journal*, *4* (1).

Mai, N. T. T. (2019). An investigation into the relationship between materialism and green purchase behavior in Vietnam and Taiwan. *Journal of Economics and Development*.

Maichum, K., Parichatnon, S., & Peng, K. C. (2016). Application of the extended theory of planned behavior model to investigate purchase intention of green products among Thai consumers. *Sustainability*, *8*(10), 1077.

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

Malodia, S., & Bhatt, A. S. (2019). Why should I switch off: understanding the barriers to sustainable consumption?. *Vision*, *23*(2), 134-143

Markowitz, E. M., & Shariff, A. F. (2012). Climate change and moral judgement. *Nature Climate Change*, *2*(4), 243-247.

Marks, A. B. (2017). Feeding the Eco-Consumer. *Vermont Law Review.*, *42*, 567.

Matharu, M., Jain, R., & Kamboj, S. (2020). Understanding the impact of lifestyle on sustainable consumption behavior: a sharing economy perspective. *Management of Environmental Quality: An International Journal*.

Meyer, A. (2015). Does education increase pro-environmental behavior? Evidence from Europe. *Ecological Economics*, *116*, 108-121.

Meyzari Ali, R., & Dasht Bozorgi, Z. (2016). The relationship of altruistic behavior, empathetic sense, and social responsibility with happiness among university students. *Practice in Clinical Psychology*, *4*(1), 51-56.

Michaelis, L. (2003). The role of business in sustainable consumption. *Journal of Cleaner Production*, *11*(8), 915-921.

Milfont, T. L., & Markowitz, E. (2016). Sustainable consumer behavior: A multilevel perspective. *Current Opinion in Psychology*, *10*, 112-117.

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.

Mogilner, C. (2010). The pursuit of happiness: Time, money, and social connection. *Psychological Science*, *21*(9), 1348-1354.

Mok, A., & De Cremer, D. (2018). Too tired to focus on others? Reminders of money promote considerate responses in the face of depletion. *Journal of Business and Psychology*, *33*(3), 405-421.

Molinsky, A. L., Grant, A. M., & Margolis, J. D. (2012). The bedside manner of homo economicus: How and why priming an economic schema reduces compassion. *Organizational Behavior and Human Decision Processes*, *119*(1), 27-37.

Mont, O., & Plepys, A. (2008). Sustainable consumption progress: should we be proud or alarmed?. *Journal of Cleaner Production*, *16*(4), 531-537.

Morrison, N. K., & Severino, S. K. (2007). Altruism: Toward a psychobiospiritual conceptualization. *Zygon®*, *42*(1), 25-40.

Mukherjee, S., Manjaly, J. A., & Nargundkar, M. (2013). Money makes you reveal more: Consequences of monetary cues on preferential disclosure of personal information. *Frontiers in psychology*, *4*, 839.

Munroe, R. L. (2018). Altruism and collectivism: An exploratory study in four cultures. *Cross-Cultural Research*, *52*(3), 334-345.

Narula, S. A., & Desore, A. (2016). Framing green consumer behaviour research: opportunities and challenges. *Social Responsibility Journal*.

Nederhof, A. J. (1985). Methods of coping with social desirability bias: A review. *European Journal of Social Psychology*, *15*(3), 263-280.

Nguyen, T. N., Lobo, A., & Greenland, S. (2016). Pro-environmental purchase behaviour: The role of consumers' biospheric values. *Journal of Retailing and Consumer Services*, *33*, 98-108.

Nosi, C., Zollo, L., Rialti, R., & Ciappei, C. (2020). Sustainable consumption in organic food buying behavior: the case of quinoa. *British Food Journal*.

Nunnally, J. C. (1978). An overview of psychological measurement. *Clinical Diagnosis of Mental Disorders*, 97-146.

Oreg, S., & Katz-Gerro, T. (2006). Predicting proenvironmental behavior cross-nationally: Values, the theory of planned behavior, and value-belief-norm theory. *Environment and Behavior*, *38*(4), 462-483.

O'Reilly, N., Ayer, S., Pegoraro, A., Leonard, B., & Rundle-Thiele, S. (2012). Toward an understanding of donor loyalty: Demographics, personality, persuasion, and revenue. *Journal of Nonprofit & Public Sector Marketing*, *24*(1), 65-81.

Pagiaslis, A., & Krontalis, A. K. (2014). Green consumption behavior antecedents: Environmental concern, knowledge, and beliefs. *Psychology & Marketing*, *31*(5), 335-348.

Panda, T. K., Kumar, A., Jakhar, S., Luthra, S., Garza-Reyes, J. A., Kazancoglu, I., & Nayak, S. S. (2020). Social and environmental sustainability model on consumers' altruism, green purchase intention, green brand loyalty and evangelism. *Journal of Cleaner production*, *243*, 118575.

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.

Papies, E. K., & Hamstra, P. (2010). Goal priming and eating behavior: enhancing self-regulation by environmental cues. *Health Psychology*, *29*(4), 384.

Park, H. J., & Lin, L. M. (2020). Exploring attitude–behavior gap in sustainable consumption: Comparison of recycled and upcycled fashion products. *Journal of Business Research*, *117*, 623-628.

Park, H., Russell, C., & Lee, J. (2007). National culture and environmental sustainability: A cross-national analysis. *Journal of Economics and Finance*, *31*(1), 104-121.

Parsons, T., & Shils, E. A. (1951). Values, motives, and systems of action. *Toward a General Theory of Action*, *33*, 247-275.

Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, *29*, 123-134.

Pavalache-Ilie, M., & Unianu, E. M. (2012). Locus of control and the pro-environmental attitudes. *Procedia-Social and Behavioral Sciences*, *33*, 198-202.

Peattie, K. (2010). Green consumption: behavior and norms. *Annual Review of Environment and Resources*, *35*(1), 195-228.

Pfeffer, J., & DeVoe, S. E. (2009). Economic evaluation: The effect of money and economics on attitudes about volunteering. *Journal of Economic Psychology*, 30(3), 500-508.

Pieters, R. (2013). Bidirectional dynamics of materialism and loneliness: Not just a vicious cycle. *Journal of Consumer Research*, *40*(4), 615-631

Piligrimienė, Ž., Žukauskaitė, A., Korzilius, H., Banytė, J., & Dovalienė, A. (2020). Internal and external determinants of consumer engagement in sustainable consumption. *Sustainability*, *12*(4), 1349.

Powers, T. L., & Hopkins, R. A. (2006). Altruism and consumer purchase behavior. *Journal of International Consumer Marketing*, *19*(1), 107-130.

Pradhan, D., Israel, D., & Jena, A. K. (2018). Materialism and compulsive buying behaviour: The role of consumer credit card use and impulse buying. *Asia Pacific Journal of Marketing and Logistics*.

Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. *Journal of Cleaner Production*, *141*, 385-393.

Prakash, G., Choudhary, S., Kumar, A., Garza-Reyes, J. A., Khan, S. A. R., & Panda, T. K. (2019). Do altruistic and egoistic values influence consumers' attitudes and purchase intentions towards eco-friendly packaged products? An empirical investigation. *Journal of Retailing and Consumer Services*, *50*, 163-169.

Price, V. (2016). *Effects of priming personal values on empathic behaviour of NHS staff* (Doctoral dissertation, Cardiff University).

Quoquab, F., & Mohammad, J. (2020). A review of sustainable consumption (2000 to 2020): What we know and what we need to know. *Journal of Global Marketing*, *33*(5), 305-334.

Raine, A., & Uh, S. (2018). The selfishness questionnaire: Egocentric, adaptive, and pathological forms of selfishness. *Journal of Personality Assessment*.

Reutner, L., & Wänke, M. (2013). For my own benefit or for the benefit of others: Reminders of money moderate the effects of self-related versus other-related persuasive arguments. *Social Psychological and Personality Science*, *4*(2), 220-223.

Richins, M. L. (1997). Measuring emotions in the consumption experience. *Journal of consumer research*, *24*(2), 127-146.

Richins, M. L. (2004). The material values scale: Measurement properties and development of a short form. *Journal of consumer Research*, *31*(1), 209-219.

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), 303-316.

Roberts, J. A. (1996). Green consumers in the 1990s: profile and implications for advertising. *Journal of Business Research*, *36*(3), 217-231.

Roberts, J. A., & Bacon, D. R. (1997). Exploring the subtle relationships between environmental concern and ecologically conscious consumer behavior. *Journal of Business Research*, *40*(1), 79-89.

Roberts, J. A., & Roberts, C. R. (2012). Money matters: does the symbolic presence of money affect charitable giving and attitudes among adolescents?. *Young Consumers*, *13*(4), 329-336.

Rohan, M. J. (2000). A rose by any name? The values construct. *Personality and Social Psychology Review*, *4*(3), 255-277.

Rokeach, M. (1973). *The nature of human values*. Free Press

Rose, P. (2007). Mediators of the association between narcissism and compulsive buying: the roles of materialism and impulse control. *Psychology of Addictive Behaviors*, *21*(4), 576.

Rucker, D., & Galinsky, A. D. (2013). Compensatory consumption. In *The Routledge companion to identity and consumption* (pp. 207-215). Taylor and Francis.

Saari, U. A., Damberg, S., Frömbling, L., & Ringle, C. M. (2021). Sustainable consumption behavior of Europeans: The influence of environmental knowledge and risk perception on environmental concern and behavioral intention. *Ecological Economics*, *189*, 107155.

Sagan, C. (1997). *Pale blue dot: A vision of the human future in space*. Ballantine Books.

Sagiv, L., Roccas, S., Cieciuch, J., & Schwartz, S. H. (2017). Personal values in human life. *Nature Human Behaviour*, *1*(9), 630-639.

Sanyal, A. (1992). Priming and implicit memory: A review and a synthesis relevant for consumer behavior. *ACR North American Advances*.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.

Savani, K., Mead, N. L., Stillman, T., & Vohs, K. D. (2016). No match for money: Even in intimate relationships and collectivistic cultures, reminders of money weaken sociomoral responses. *Self and Identity*, *15*(3), 342-355.

Scalco, A., Noventa, S., Sartori, R., & Ceschi, A. (2017). Predicting organic food consumption: A meta-analytic structural equation model based on the theory of planned behavior. *Appetite*, *112*, 235-248.

Schacter, D. L. (1992). Priming and multiple memory systems: Perceptual mechanisms of implicit memory. *Journal of Cognitive Neuroscience*, *4*(3), 244-256.

Schacter, D. L., & Buckner, R. L. (1998). Priming and the brain. *Neuron*, *20*(2), 185-195.

Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing*, *30*(5), 35-55.

Schrader, U., & Thøgersen, J. (2011). Putting sustainable consumption into practice. *Journal of Consumer Policy*, *34*(1), 3-8.

Schroeder, D. A., Dovidio, J. F., Sibicky, M. E., Matthews, L. L., & Allen, J. L. (1988). Empathic concern and helping behavior: Egoism or altruism?. *Journal of Experimental Social Psychology*, *24*(4), 333-353.

Schroeder, J. E., & Dugal, S. S. (1995). Psychological correlates of the materialism construct. *Journal of Social Behavior and Personality*, *10*(1), 243.

Schuler, J., & Wänke, M. (2016). A fresh look on money priming: Feeling privileged or not makes a difference. *Social Psychological and Personality Science*, *7*(4), 366-373.

Schultz, P. W., & Zelezny, L. (1999). Values as predictors of environmental attitudes: Evidence for consistency across 14 countries. *Journal of environmental psychology*, *19*(3), 255-265.

Schwartz, S. H. (1977). Normative influences on altruism. In *Advances in Experimental Social Psychology* (Vol. 10, pp. 221-279). Academic Press.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In *Advances in Experimental Social Psychology* (Vol. 25, pp. 1-65). Academic Press.

Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online Readings in Psychology and Culture*, *2*(1), 2307-0919.

Schwartz, S. H., & Bilsky, W. (1990). Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology*, *58*(5), 878.

Schwartz, S. H., & Boehnke, K. (2004). Evaluating the structure of human values with confirmatory factor analysis. *Journal of Research in Personality*, *38*(3), 230-255.

Schwepker Jr, C. H., & Cornwell, T. B. (1991). An examination of ecologically concerned consumers and their intention to purchase ecologically packaged products. *Journal of Public Policy & Marketing*, *10*(2), 77-101.

Sesardic, N. (1999). Altruism. *The British Journal for the Philosophy of Science*, *50*(3), 457-466.

Shapira O., Molouki S., Mead N. L., Caruso E. M. (2014). *I think I have, therefore I deserve: Thinking about money increases men's sense of entitlement*. Poster presented at the annual meeting of the Society for Personality and Social Psychology, Austin, TX.

Shariff, A. F., & Norenzayan, A. (2007). God is watching you: Priming God concepts increases prosocial behavior in an anonymous economic game. *Psychological science*, *18*(9), 803-809.

Sharma, R., & Jha, M. (2017). Values influencing sustainable consumption behaviour: Exploring the contextual relationship. *Journal of Business Research*, *76*, 77-88.

Sharp, A. (2013). Sustainable marketing in principle and practice. In *Sustainable Business* (pp. 108-119). Edward Elgar Publishing.

Shaw, D., & Moraes, C. (2009). Voluntary simplicity: An exploration of market interactions. *International Journal of Consumer Studies*, *33*(2), 215-223.

Shek, D. T., Dou, D., Zhu, X., Li, X., & Tan, L. (2022). Materialism, egocentrism and delinquent behavior in Chinese adolescents in Mainland China: a short-term longitudinal study. *International Journal of Environmental Research and Public Health*, *19*(8), 4912.

Shiri, A., Mandrik, C., & Ekici, A. (2018). How Does Donation Box Transparency Affect Charitable Giving? A Money Priming Perspective. *ACR European Advances*.

Shrum, L. J., Chaplin, L. N., & Lowrey, T. M. (2022). Psychological causes, correlates, and consequences of materialism. *Consumer Psychology Review*, *5*(1), 69-86.

Shrum, L. J., McCarty, J. A., & Lowrey, T. M. (1995). Buyer characteristics of the green consumer and their implications for advertising strategy. *Journal of Advertising*, *24*(2), 71-82.

Shrum, L. J., Wong, N., Arif, F., Chugani, S. K., Gunz, A., Lowrey, T. M., ... & Sundie, J. (2013). Reconceptualizing materialism as identity goal pursuits: Functions, processes, and consequences. *Journal of Business Research*, *66*(8), 1179-1185.

Shukla, P. R., Skeg, J., Buendia, E. C., Masson-Delmotte, V., Pörtner, H. O., Roberts, D. C., ... & Malley, J. (2019). Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.

Sloman, S. A. (1996). The empirical case for two systems of reasoning. *Psychological Bulletin*, *119*(1), 3.

Smyczek, S. (2020). Consumer Values and Misbehavior in the Context of Sustainable Consumption. *Review of Business*, *40*(2).

Sober, E. & Wilson, D.S. (1998) Unto Others: The Evolution and Psychology of Unselfish Behavior, *Harvard University Press.*

Squire, L. R. (1992). Declarative and nondeclarative memory: Multiple brain systems supporting learning and memory. *Journal of Cognitive Neuroscience*, *4*(3), 232-243.

Squire, L. R. (2004). Memory systems of the brain: a brief history and current perspective. *Neurobiology of Learning and Memory*, *82*(3), 171-177.

Squire, L. R., & Zola-Morgan, S. (1991). The medial temporal lobe memory system. *Science*, *253*(5026), 1380-1386.

Sreen, N., Purbey, S., & Sadarangani, P. (2020). Understanding the relationship between different facets of materialism and attitude toward green products. *Journal of Global Marketing*, *33*(5), 396-416.

Stajkovic, A. D., Greenwald, J. M., & Stajkovic, K. S. (2022). The money priming debate revisited: A review, meta-analysis, and extension to organizations. *Journal of Organizational Behavior*.

Stern, P. C. (2000). New environmental theories: toward a coherent theory of environmentally significant behavior. *Journal of social issues*, *56*(3), 407-424.

Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human Ecology Review*, 81-97.

Stern, P. C., Kalof, L., Dietz, T., & Guagnano, G. A. (1995). Values, beliefs, and proenvironmental action: Attitude formation toward emergent attitude objects 1. *Journal of Applied Social Psychology*, *25*(18), 1611-1636.

Suárez, E., Hernández, B., Gil-Giménez, D., & Corral-Verdugo, V. (2020). Determinants of frugal behavior: the influences of consciousness for sustainable consumption, materialism, and the consideration of future consequences. *Frontiers in Psychology*, *11*, 567752.

Takala, M. (1991). Environmental awareness and human activity. *International Journal of Psychology*, *26*(5), 585-597.

Teng, F., Chen, Z., Poon, K. T., Zhang, D., & Jiang, Y. (2016). Money and relationships: When and why thinking about money leads people to approach others. *Organizational Behavior and Human Decision Processes*, *137*, 58-70.

Terlau, W., & Hirsch, D. (2015). Sustainable consumption and the attitude-behaviour-gap phenomenon-causes and measurements towards a sustainable development. *International Journal on Food System Dynamics*, *6*(3), 159-174.

Thøgersen, J., & Grunert-Beckmann, S. C. (1997). Values and attitude formation towards emerging attitude objects: From recycling to general, waste minimizing behavior. *Advances in Consumer Research*, *24*(1).

Thøgersen, J., & Ölander, F. (2002). Human values and the emergence of a sustainable consumption pattern: A panel study. *Journal of Economic Psychology*, *23*(5), 605-630.

Thøgersen, J., & Ölander, F. (2003). Spillover of environment-friendly consumer behaviour. *Journal of Environmental Psychology*, *23*(3), 225-236.

Thyroff, A., & Kilbourne, W. E. (2018). Self-enhancement and individual competitiveness as mediators in the materialism/consumer satisfaction relationship. *Journal of Business Research*, *92*, 189-196.

Toi, M., & Batson, C. D. (1982). More evidence that empathy is a source of altruistic motivation. *Journal of Personality and Social Psychology*, *43*(2), 281.

Tripathi, A., & Singh, M. P. (2016). Determinants of sustainable/green consumption: a review. *International Journal of Environmental Technology and Management*, *19*(3-4), 316-358.

Trivers, R. L. (1971). The evolution of reciprocal altruism. *The Quarterly Review of Biology*, *46*(1), 35-57.

Trudel, R. (2019). Sustainable consumer behavior. *Consumer Psychology Review*, *2*(1), 85-96.

Tucker Jr, L. R. (1980). Identifying the environmentally responsible consumer: the role of internal-external control of reinforcements. *Journal of Consumer Affairs*, *14*(2), 326-340.

Tulving, E., & Schacter, D. L. (1990). Priming and human memory systems. *Science*, *247*(4940), 301-306.

United Nations Environment Programme. (2015). Sustainable Consumption and Production. *A Handbook for Policy Makers Global Edition.*

United Nations Environment Programme. (2021). Planetary Action. *UNEP*.

Urien, B., & Kilbourne, W. (2011). Generativity and self-enhancement values in eco-friendly behavioral intentions and environmentally responsible consumption behavior. *Psychology & Marketing*, *28*(1), 69-90.

Van Staveren, I. (2007). Beyond utilitarianism and deontology: Ethics in economics. *Review of Political Economy*, *19*(1), 21-35.

Vantamay, N. (2018). Investigation and recommendations on the promotion of sustainable consumption behavior among young consumers in Thailand. *Kasetsart Journal of Social Sciences*, *39*(1), 51-58

Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude–behavioral intention" gap. *Journal of Agricultural and Environmental Ethics*, *19*(2), 169-194.

Vohs, K. D. (2015). Money priming can change people's thoughts, feelings, motivations, and behaviors: An update on 10 years of experiments. *Journal of Experimental Psychology: General*, *144*(4), e86.

Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science*, *314*(5802), 1154-1156.

Vohs, K. D., Mead, N. L., & Goode, M. R. (2008). Merely activating the concept of money changes personal and interpersonal behavior. *Current Directions in Psychological Science*, *17*(3), 208-212.

Wagner III, J. A. (1995). Studies of individualism-collectivism: Effects on cooperation in groups. *Academy of Management journal*, *38*(1), 152-173.

Wang, L., Wong, P. P. W., & Alagas, E. N. (2020). Antecedents of green purchase behaviour: an examination of altruism and environmental knowledge. *International Journal of Culture, Tourism and Hospitality Research*.

Wang, P., Liu, Q., & Qi, Y. (2014). Factors influencing sustainable consumption behaviors: a survey of the rural residents in China. *Journal of Cleaner Production*, *63*, 152-165.

WBCSD. (2008). Sustainable consumption: Facts and trends from a business perspective.

WCED, S. W. S. (1987). World commission on environment and development. *Our Common Future*, *17*(1), 1-91.

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.

Weber, E. U. (2017). Breaking cognitive barriers to a sustainable future. *Nature Human Behaviour*, *1*(1), 1-2.

Wei, C. F., Chiang, C. T., Kou, T. C., & Lee, B. C. (2017). Toward sustainable livelihoods: Investigating the drivers of purchase behavior for green products. *Business Strategy and the Environment*, *26*(5), 626-639.

Weigel, R. H. (1983). Environmental attitudes and the prediction of behavior. *Environmental Psychology: Directions and Perspectives*, 257-287.

Wentura, D., & Degner, J. (2010). A practical guide to sequential priming and related tasks. In B. Gawronski & B. K. Payne (Eds.), *Handbook of Implicit Social Cognition: Measurement, Theory, and Applications* (pp. 95–116). The Guilford Press.

White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT consumer behaviors to be more sustainable: A literature review and guiding framework. *Journal of Marketing*, *83*(3), 22-49.

White, K., Hardisty, D. J., & Habib, R. (2019). The elusive green consumer. *Harvard Business Review*, *11*(1), 124-133.

Whitmarsh, L., & O'Neill, S. (2010). Green identity, green living? The role of pro-environmental self-identity in determining consistency across diverse pro-environmental behaviors. *Journal of Environmental Psychology*, *30*(3), 305-314.

Wiener, J. L., & Doescher, T. A. (1991). A framework for promoting cooperation. *Journal of Marketing*, *55*(2), 38-47

Williams, J., & Bryce, W. (1992). Materialism and care for others. *ACR Special Volumes*.

Wong, N. Y. (1997). Suppose you own the world and no one knows? Conspicuous consumption, materialism and self. *ACR North American Advances*.

Wu, S. I., & Chen, J. Y. (2014). A model of green consumption behavior constructed by the theory of planned behavior. *International Journal of Marketing Studies*, *6*(5), 119.

Xiao, J. J., & Li, H. (2011). Sustainable consumption and life satisfaction. *Social Indicators Research*, *104*(2), 323-329.

Xu, Y., Li, W., & Chi, S. (2021). Altruism, environmental concerns, and pro-environmental behaviors of urban residents: a case study in a typical Chinese city. *Frontiers in Psychology*, 1917.

Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, *135*, 732-739.

Yang, Q., Wu, X., Zhou, X., Mead, N. L., Vohs, K. D., & Baumeister, R. F. (2013). Diverging effects of clean versus dirty money on attitudes, values, and interpersonal behavior. *Journal of Personality and Social Psychology*, *104*(3), 473.

Yang, S., Li, L., & Zhang, J. (2018). Understanding consumers' sustainable consumption intention at china's double-11 online shopping festival: An extended theory of planned behavior model. *Sustainability*, *10*(6), 1801.

Yankelovich, D. (1981). New rules: Searching for self-fulfillment in a world turned upside down.

Yarimoglu, E., & Binboga, G. (2019). Understanding sustainable consumption in an emerging country: The antecedents and consequences of the ecologically conscious consumer behavior model. *Business Strategy and the Environment*, *28*(4), 642-651.

Yurteri, S. (2021). *Effects of Brand Priming on Sustainable Consumption Attitudes and Behaviors* (Master's thesis, Middle East Technical University).

Zanna, M. P., Rempel, J. K., Bar-Tal, D., & Kruglanski, A. W. (1988). The social psychology of knowledge. *Editions de la Maison des Sciences de l'Homme*, 315-354.

Zelezny, L. C., Chua, P. P., & Aldrich, C. (2000). New ways of thinking about environmentalism: Elaborating on gender differences in environmentalism. *Journal of Social Issues*, *56*(3), 443-457.

Zemack-Rugar, Y., Bettman, J. R., & Fitzsimons, G. J. (2007). The effects of nonconsciously priming emotion concepts on behavior. *Journal of Personality and Social Psychology*, *93*(6), 927.

Zhang, Y., Zhang, H. L., Zhang, J., & Cheng, S. (2014). Predicting residents' pro-environmental behaviors at tourist sites: The role of awareness of disaster's consequences, values, and place attachment. *Journal of Environmental Psychology*, *40*, 131-146.

Zhou, X., Vohs, K. D., & Baumeister, R. F. (2009). The symbolic power of money: Reminders of money alter social distress and physical pain. *Psychological Science*, *20*(6), 700-706.

Zsóka, Á., Szerényi, Z. M., Széchy, A., & Kocsis, T. (2013). Greening due to environmental education? Environmental knowledge, attitudes, consumer behavior and everyday pro-environmental activities of Hungarian high school and university students. *Journal of Cleaner Production*, *48*, 126-138.

APPENDICES

A. Informed Consent Form of the Pretests

Informed Consent Form

This study is being conducted by Uygar Koruk, a masters student in the Sustainable Environment and Energy Systems Program at METU Northern Cyprus Campus. This form contains information that will help you decide whether or not to participate in the study. Your participation in the study is entirely voluntary.

What is the purpose of this study?

The purpose of this study is to help to develop test materials that will be used in a subsequent study by the researcher.

What is expected of you as a participant of the study?

If you agree to participate in the study, you will be asked to respond to various questions and/or a short writing task.

How will the information I provide be used?

Only the researcher will have access to the information obtained during the course of the study and this information will be used only for scientific purposes (i.e. scientific publications, congresses, seminars, lectures). Any identifying information will not be requested from the participants within the scope of this study and the information you provide will not be associated with your identity. Results of the research will be evaluated as a whole, not on an individual basis..

Can I withdraw from the study?

The researchers do not anticipate that your participation in the study will involve any physical or mental risk. However, you are free to leave the study at any point without giving a reason. If you choose to withdraw from the study, you simply need to contact the person administering the study.

Will I be given an opportunity to ask any questions about the study?

Once the task is completed, you are free to ask any questions regarding the study.

If you are willing the participate in the study please make sure that you are agreeing with the following statement:

I participate in this study entirely on voluntary basis. I have read the information provided above describing this study. I am aware that I can leave the study at any time without giving a reason. I give my consent to the researcher to use all the information that I provide for scientific purposes.

B. Pretest I: Unscrambling Task for the Money Group (Experimental Group)

Unscrambling Task

Please unscramble these sentences to create a complete sentence.

1. pancakes loves she eating

   _____

2. comfort money bring can

   _____

3. won lottery the million dollar she

   _____

4. is secretary the she

   _____

5. wallet full of a money

   _____

6. waste don't your money

   _____

7. play I guitar the

   _____

8. yesterday came back they

   _____

9. printed he documents the

   _____

10. needs to he cash withdraw

    _____

11. high a salary is paying good

    _____

12. much got so he money has

    _____

13. broke the I glass

    _____

14. creates investing wealth money

    _____

15. dog fed he his

    _____

16. is late getting it

    _____

17. the dishes washed I

    _____

18. wrote she report the

    _____

19. working money hard earns

    _____

20. on there is table cash the

    _____

C. Pretest I. Unscrambling Task for the Neutral Group (Control Group)

Unscrambling Test

Please unscramble these sentences to create a complete sentence.

1. pancakes loves she eating

   _____

2. miss her smile I

   _____

3. nice grandma her is

   _____

4. is secretary the she

   _____

5. play I guitar the

   _____

6. yesterday came back they

   _____

7. printed he documents the

   _____

8. voice is lovely her

   _____

9. broke the I glass

   _____

10. dog fed he his

    _____

11. speaks so fast she

    _____

12. voice his heard we

    _____

13. is late getting it

    _____

14. the dishes washed I

    _____

15. wrote she report the

    _____

16. cold his is house

    _____

17. the dishes washed I

    _____

18. going is he abroad

    _____

19. saw movie this we

    _____

20. holiday I need a

    _____

D. Pretest II. Paragraph Writing Task for the Money Group (Experimental Group)

Paragraph Writing Task

For the following task, you are asked to write a short story (about one paragraph, 4-5 sentences) that includes the words provided below. There are no right or wrong answers, just write freely what comes to your mind.

1-Write a short story (4-5 sentences) that uses all the following words:

MONEY - WEALTH - INVESTMENT - CASH - DOLLAR - BANK - FINANCE

_____

_____

_____

_____

E. Pretest II. Paragraph Writing Task for the Neutral Group (Control Group)

Paragraph Writing Task

For the following task, you are asked to write a short story (about one paragraph, 4-5 sentences) that includes the words provided below. There are no right or wrong answers, just write freely what comes to your mind.

1-Write a short story (4-5 sentences) that uses all the following words:

CHAIR - WATER - FRIENDS - TALK - SIT - TABLE - CAFE

_____

_____

_____

_____

F. Measures of the Pretests (Self-Report Scale and Personal Information)

Questions

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

	Strongly Agree				Strongly Disagree
1- Right now I feel like I would prefer to be independent from others.	1	2	3	4	5
2- At this moment I feel like I would prefer people to be independent from me.	1	2	3	4	5
3- I would describe myself as an environmentally responsible person.	1	2	3	4	5
4- I believe climate change is an important problem that we are facing.	1	2	3	4	5
5- My life would be better if I owned certain things I do not have.	1	2	3	4	5
6- I help others even when there is no direct benefit to me.	1	2	3	4	5
7- The phrase unscrambling task was difficult to solve.	1	2	3	4	5

Personal Information

1- What is your gender? Male____ Female____ Other____

2 - What is your age? _____

3 - What is your nationality?

Turkish____ Turkish Cypriot____ Other:_____

Thank you!

A

G. Scientific Research and Publication Ethics Committee (BAYEK) Approval for the Pretests

BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU
SCIENTIFIC RESEARCH AND PUBLICATION ETHICS COMMITTEE
BAYEK

ODTÜ KUZEY KIBRIS KAMPUSU
KALKANLI, GÜZELYURT, K.K.T.C.
MERSİN 10 TÜRKİYE

T: +90 392 661 1901
E: nccbayek@metu.edu.tr
www.ncc.metu.edu.tr/bayek

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY
KUZEY KIBRIS KAMPUSU • NORTHERN CYPRUS CAMPUS

20/05/2022

Scientific Research and Publication Ethics Committee (BAYEK)

Dear Uygar Koruk,

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: Pretests for the Selection of Money Priming Methods

Your application has been approved and has been found to be in compliance with the code of ethics within 23/01/2022 - 31/07/2022 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,

H. Informed Consent Form of the Experiments

Informed Consent Form

This study is being conducted by Uygar Koruk, a masters student in the Sustainable Environment and Energy Systems Program at METU Northern Cyprus Campus. This form contains information that will help you decide whether or not to participate in the study. Your participation in the study is entirely voluntary.

What is the purpose of this study?

The purpose of this study to examine how verbal skills are related to various attitudes and behaviors.

What is expected of you as a participant of the study?

If you agree to participate in the study, you will be asked to complete a phrase unscrambling test and/or a short writing task.

How will the information I provide be used?

Only the researcher will have access to the information obtained during the course of the study and this information will be used only for scientific purposes (i.e. scientific publications, congresses, seminars, lectures). Any identifying information will not be requested from the participants within the scope of this study and the information you provide will not be associated with your identity. Results of the research will be evaluated as a whole, not on an individual basis.

Can I withdraw from the study?

The researchers do not anticipate that your participation in the study will involve any physical or mental risk. However, you are free to leave the study at any point without giving a reason. If you choose to withdraw from the study, you simply need to contact the person administering the study.

Will I be given an opportunity to ask any questions about the study?

Once the task is completed, you are free to ask any questions regarding the study.

If you are willing the participate in the study please make sure that you are agreeing with the following statement:

I participate in this study entirely on voluntary basis. I have read the information provided above describing this study. I am aware that I can leave the study at any time without giving a reason. I give my consent to the researcher to use all the information that I provide for scientific purposes.

Project Supervisors
Assoc. Prof. Dr. Carter Mandrik
Asst. Prof Dr. Ceren İnce

I. Edited Paragraph Writing Task for the Experiment II. Neutral Group

Paragraph Writing Task

For the following task, you are asked to write a short story (about one paragraph, 4-5 sentences) that includes the words provided below. There are no right or wrong answers, just write freely what comes to your mind.

1-Write a short story (4-5 sentences) that uses all the following words:

CHAIR – DRINKING – DAY - BOOK - SITTING - TABLE - THINKING

_____
_____
_____
_____
_____
_____

J. Scientific Research and Publication Ethics Committee (BAYEK) Approval for the Pretests

BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU
SCIENTIFIC RESEARCH AND PUBLICATION ETHICS COMMITTEE
BAYEK

ODTÜ KUZEY KIBRIS KAMPUSU
KALKANLI, GÜZELYURT, K.K.T.C.
MERSİN 10 TÜRKİYE

T: +90 392 661 1901
E: nccbayek@metu.edu.tr
www.ncc.metu.edu.tr/bayek

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY
KUZEY KIBRIS KAMPUSU • NORTHERN CYPRUS CAMPUS

04/07/2022

Scientific Research and Publication Ethics Committee (BAYEK)

Dear Uygar Koruk,

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:
Thesis Experiment: Money Priming's Effects on Sustainable Consumption Attitudes.

Your application has been approved and has been found to be in compliance with the code of ethics within 31/05/2022 - 02/09/2022 dates.

A "debriefing" statement which clarifies the experimental procedures to participants is recommended. This statement is usually provided after the experiment in order not to compromise the effects of manipulation.

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

TEZ İZİN FORMU / THESIS PERMISSION FORM

PROGRAM / PROGRAM

Sürdürülebilir Çevre ve Enerji Sistemleri / Sustainable Environment and Energy Systems ☑

Siyaset Bilimi ve Uluslararası İlişkiler / Political Science and International Relations ☐

İngilizce Öğretmenliği / English Language Teaching ☐

Elektrik Elektronik Mühendisliği / Electrical and Electronics Engineering ☐

Bilgisayar Mühendisliği / Computer Engineering ☐

Makina Mühendisliği / Mechanical Engineering ☐

YAZARIN / AUTHOR

Soyadı / Surname : Korcuk

Adı / Name : Uygar

Programı / Program : Sustainable Environment and Energy Systems

TEZİN ADI / TITLE OF THE THESIS (**İngilizce** / English) : Implications of Money Priming on Sustainable Consumption

TEZİN TÜRÜ / DEGREE: **Yüksek Lisans** / Master ☑ **Doktora** / PhD ☐

1. **Tezin tamamı dünya çapında erişime açılacaktır.** / Release the entire work immediately for access worldwide. ☐

2. **Tez <u>iki yıl</u> süreyle erişime kapalı olacaktır.** / Secure the entire work for patent and/or proprietary purposes for a period of **<u>two years</u>.** * ☐

3. **Tez <u>altı ay</u> süreyle erişime kapalı olacaktır.** / Secure the entire work for period of **<u>six months</u>**. * ☑

Yazarın imzası / Author Signature ..... **Tarih** / Date 23.01.2023

Tez Danışmanı / Thesis Advisor Full Name: Ceren İnce Dergar

Tez Danışmanı İmzası / Thesis Advisor Signature: .....

Eş Danışmanı / Co-Advisor Full Name: Carter Mandrik

Eş Danışmanı İmzası / Co-Advisor Signature .....

Program Koordinatörü / Program Coordinator Full Name: Ceren İnce Dergar

Program Koordinatörü İmzası / Program Coordinator Signature: .....