

Recycled or Upcycled? Exploring Consumer Preferences, Uniqueness, and Implicit Theories

by

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Koç University

Graduate School of Business

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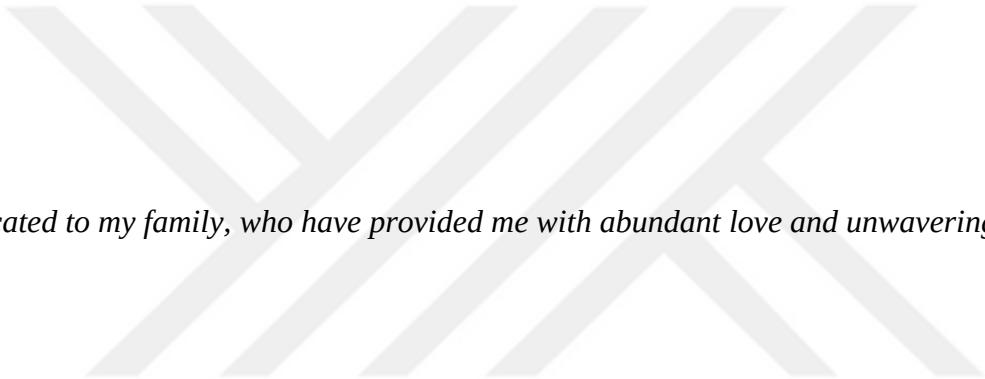
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Dedicated to my family, who have provided me with abundant love and unwavering strength

Abstract

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Sustainability is vital for ensuring a balanced and harmonious relationship between people, the planet, and prosperity. In this context, the significance of recycled and upcycled products becomes evident. This thesis is centered around exploring consumer preferences for these sustainable alternatives. In Essay 1, the study delves into the influence of implicit theories (entity vs. incremental) on the adoption of environmentally friendly alternatives (recycled vs. upcycled). Notable distinctions exist between these two sustainable production methods, prompting an investigation into how these cognitive orientations impact the selection between recycled and upcycled products. Across 2 pretests and 7 studies these relationships are examined. In Essay 2, attention shifts exclusively to upcycled products, analyzing their varying levels of uniqueness. While inherent uniqueness characterizes each upcycled item, the degree of uniqueness varies across different products. The relationship between consumer preference, upcycled product uniqueness, and the perceived sense of distinctiveness is examined. In the synthesis of empirical findings and theoretical foundations, both essays yield valuable insights, enriching the consumer behavior literature related to sustainable product selection.

Özetçe

Geri Dönüştürmek mi yoksa İleri Dönüştürmek mi? Tüketici tercihlerini anlamak,

Benzersizlik ve Örtük Zeka Teorisi

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Sürdürülebilirlik, insanlar, gezegen ve refah arasında dengeli ve uyumlu bir ilişkinin sağlanması için hayati öneme sahiptir. Bu bağlamda, geri dönüştürülmüş ve ileri dönüştürülmüş ürünlerin önemi açıkça ortaya çıkmaktadır. Bu tez, sürdürülebilir seçenekler olarak bu ürünlere yönelik tüketici tercihlerini keşfetmeyi merkezine alır ve iki makaleden oluşmaktadır. İlk makale, çevre dostu üretim seçeneklerinin (geri dönüştürülmüş vs. ileri dönüştürülmüş) benimsenmesi üzerine örtük zeka teorisinin (varlık vs. artımsal) etkisine ışık tutmaktadır. Bu araştırma örtük zeka teorisindeki bilişsel yönelimlerin, arasında üretim yöntemi açısından belirgin farklılıklar bulunan geri dönüştürülmüş ve ileri dönüştürülmüş ürünler arasındaki seçimi nasıl etkilediğini incelemektedir. Bu ilişkiler 2 ön test ve 7 deney ile incelenmiştir. İkinci makale, özel olarak ileri dönüştürülmüş ürünlere odaklanmıştır ve bu ürünlerin farklı benzersizlik seviyeleri analiz edilmiştir. Her ileri dönüştürülmüş ürünün yapısı gereği bir benzersizliği vardır fakat bu farklılık ürün çeşidine göre değişkenlik gösterebilmektedir. Bu araştırma, çeşitli seviyelerde benzersiz özelliklere sahip ileri dönüştürülmüş ürünler arasındaki tüketici tercihi ve algılanan ayrıcalık hissi arasındaki ilişkiyi incelemektedir. Her makale de, deneysel bulguların ve teorik temellerin sentezi olarak, sürdürülebilir ürün seçimiyle ilgili tüketici davranışları literatürünü zenginleştirerek değerli içgörüler sunmaktadır.

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Table of Contents

List of Tables	xiii
List of Figures	xiv
Abbreviations	xv
1 Introduction	1
1.1 Synopsis of Essay 1	1
1.2 Synopsis of Essay 2	2
2 Essay 1	4
2.1 Introduction	4
2.2 Conceptual Background	5
2.2.1 Implicit Theories	5
2.2.2 Upcycled and Recycled Products in Consumption Context	9
2.3 Theoretical Framework	13
2.4 Studies	17
2.4.1 Pretest 1	17
2.4.2 Study 1	18
2.4.2.1 Results	20
2.4.2.2 Discussion	22
2.4.3 Study 2	22
2.4.3.1 Results	23
2.4.3.2 Discussion	25

viii

2.4.4	Pretest 2.....	26
2.4.4.1	Results	27
2.4.4.2	Discussion.....	28
2.4.5	Study 3	28
2.4.5.1	Results	29
2.4.5.2	Discussion.....	30
2.4.6	Study 4	31
2.4.6.1	Results	32
2.4.6.2	Discussion.....	33
2.4.7	Study 5	34
2.4.7.1	Results	35
2.4.7.2	Discussion.....	37
2.4.8	Study 6	37
2.4.8.1	Results	38
2.4.8.2	Discussion.....	39
2.4.9	Study 7	40
2.4.9.1	Results	41
2.4.9.2	Discussion.....	42
2.5	General Discussion.....	42
2.5.1	Summary of Findings.....	42
2.5.2	Theoretical Contributions	46

2.5.3	Managerial Implications	47
2.5.4	Limitations and Directions for Future Research.....	48
3	Essay 2.....	51
3.1	Introduction	51
3.2	Conceptual Background	52
3.2.1	Uniqueness.....	52
3.2.1.1	Uniqueness in Products	53
3.2.1.2	Perceived Uniqueness.....	56
3.2.1.3	Need for Uniqueness	57
3.2.2	Felt Specialness.....	58
3.2.3	Upcycled products and Uniqueness	59
3.3	Theoretical Framework	60
3.4	Studies	66
3.4.1	Study 1	66
3.4.1.1	Results	67
3.4.1.2	Discussion.....	73
3.4.2	Study 2	76
3.4.2.1	Results	77
3.4.2.2	Discussion.....	85
3.4.3	Study 3	89
3.4.3.1	Results	90

3.4.3.2	Consumers' Need for Uniqueness as Moderator	96
3.4.3.3	Discussion.....	97
3.5	General Discussion.....	100
3.5.1	Summary of Findings.....	100
3.5.2	Theoretical Contributions	103
3.5.3	Managerial Implications	104
3.5.4	Limitations and Directions for Future Research	105
4	Conclusion.....	106
	Bibliography	109
	Appendix.....	120
4.1	Appendix – Essay 1.....	120
4.1.1	Study 1	120
4.1.2	Study 2	121
4.1.3	Pretest 2.....	122
4.1.4	Study 3	123
4.1.5	Study 4.....	125
4.1.6	Study 5	126
4.1.7	Study 6	126
4.1.8	Study 7	127
4.2	Appendix – Essay 2.....	128
4.2.1	Study 1	128

4.2.2	Study 3	130
4.2.2.1	Creative Choice Counterconformity	130
4.2.2.2	Avoidance of Similarity	131



List of Tables

Table 1 - Summary of the configuration of studies for Essay 144

Table 2 - Summary of the configuration of studies for Essay 2102



List of Figures

Figure 1 - Conceptual map for the mediation model in Study 1.....	74
Figure 2 - Conceptual map for the serial mediation model in Study 1	75
Figure 3 - Slider used to indicate the amount participants are willing to pay for the product within the Study	124
Figure 4 - Picture of the common backpack in upcycled, recycled and conventional conditions, utilized within Study 1, Study 2, Study 3, Pretest 2, Study 7	124
Figure 5 - Slider used to indicate the amount participants are willing to pay for the product within the Study	126
Figure 6 - Picture of the jacket used in upcycled and recycled conditions in Study 4 and Study 7.....	128
Figure 7 - Picture of the backpack used in upcycled and recycled conditions in all studies within Essay 2	130

Abbreviations

WTP Willingness to Pay

CNFU Consumers' Need for Uniqueness

CCC Creative Choice Counterconformity

UCC Unpopular Choice Counterconformity

AS Avoidance of Similarity

1 Introduction

The need for sustainability is growing each day, owing to its pivotal role in establishing a harmonious equilibrium between humanity and the environment. An area of profound concern within this paradigm is consumption. The momentum for both consumers and businesses to transition towards sustainable practices encompassing products, production methods, and materials is steadily intensifying. In this evolving landscape, the significance of recycled and upcycled products and materials becomes increasingly evident. In light of this, comprehending the underlying mechanisms behind consumers' preferences for these sustainable alternatives remains a subject of ongoing investigation, punctuated by numerous unanswered questions. Within the realm of product preference, characteristics intrinsic to the product and variations in individual consumer attributes hold pivotal influences. The two essays within this thesis undertake a comprehensive exploration of this juncture, addressing both the product and consumer aspects, and offers versatile insights catering to diverse attributes of both domains.

1.1 Synopsis of Essay 1

The concept of recycling has been familiar for many years, yet the proliferation and importance of end-products crafted from recycled materials is a relatively recent phenomenon. Similarly, the notion of upcycling, while relatively new, has garnered considerable attention in the recent past. Despite its recent emergence as a production method, upcycling has quickly captured interest.

However, understanding why consumers lean toward specific sustainable production methods, whether recycled or upcycled, remains limited. Essay 1 seeks to resolve this limitation in literature by investigating implicit self-theory to comprehend consumer inclinations toward recycled and upcycled products. It delves into the underlying rationales shaping these preferences. Implicit theories consist of two types of mindsets: entity and incremental theorists. The data demonstrate that entity theorists, who believe in fixed personality traits, prefer recycled products, whereas incremental theorists, who think that the personality traits are malleable, and they can through effort, lean towards upcycled products. The results uncovered significant insights into sustainable consumer behavior in relation to recycled and upcycled alternatives, contributing to the evolving discourse on environmentally conscious consumption.

1.2 Synopsis of Essay 2

Upcycling, as highlighted in Essay 1, is a novel and innovative approach within sustainable production, and it holds critical importance in the realm of research. Investigating upcycling allows us to understand its multifaceted impacts on waste reduction, resource conservation, and the circular economy, while also shedding light on the evolving consumer preferences that drive its adoption. The primary objective of Essay 2 is to enhance the understanding of the preferences of upcycled products. This focus is specifically directed towards examining the uniqueness levels of upcycled items, an area scarcely touched upon in existing literature. While inherent uniqueness is present in each upcycled product, distinct variations in uniqueness levels emerge based on the product category and the materials used. The study comprehensively investigates one-of-a-kind, few-of-a-kind, and regular upcycled products, with an exploration of consumers' need for uniqueness. The findings exhibit that purchase intention, product liking, and willingness to pay for

one-of-a-kind and few-of-a-kind upcycled products (vs. regular upcycled products) are mediated by consumers' felt specialness. Moreover, the results indicated that introducing a uniqueness frame altered the perspective associated with few-of-a-kind upcycled products.

Both essays contribute to the growing body of knowledge surrounding sustainable practices, offering insights that have the potential to reshape industries, consumer behaviors, and policies in pursuit of a more environmentally responsible future.



2 Essay 1

2.1 Introduction

Sustainability and environmentally conscious consumer behavior have become increasingly important in today's global society (Jackson 2005; Steg and Vlek 2009). As the effects of climate change and resource depletion become more apparent, the need for sustainable consumption practices and developing products that minimize environmental impact became crucial (Cohen et al. 2013; Whitmarsh and O'Neill 2010). The field of sustainable consumption has attracted attention from researchers, focusing on understanding the factors that drive consumers to adopt environmentally friendly behaviors, such as purchasing recycled or upcycled products (Gleim et al. 2013; Trudel et al. 2016).

Recycled and upcycled products offer alternative approaches to waste reduction by breaking down or repurposing used conventional products into new, often distinct, items (Ghisellini et al. 2016; Pham et al. 2021). Despite employing used conventional products as their foundational materials, recycled and upcycled products exhibit significant differences in terms of perceived quality (Bae 2021; Park and Lin 2020), production methods, and regulatory compliance (Bianchi and Noci 1998; Chen et al. 2021). These disparities in the production processes and end products also manifest in consumers' product preferences and purchasing decisions (Luchs et al. 2010).

This Ph.D. thesis extends the body of research on consumers' liking and preference around recycled and upcycled products. It explores the role of implicit theories - entity theory and incremental theory - in shaping consumers' preferences regarding sustainable consumption (Dweck and Leggett 1988; Park and John 2010).

Moreover, the research delves into the distinct characteristics of entity and incremental theorists and their influence on product selection approaches (Murphy and Dweck 2016; Park and John 2012). It also examines the differences between upcycled and recycled products, highlighting their unique attributes and potential impact on consumers' preferences, considering their implicit theory mindset (Adigüzel and Donato 2021; Kamleitner et al. 2019).

By examining the relationship between implicit theories and sustainable consumption behavior, this research seeks to contribute valuable insights to the growing body of knowledge on environmentally conscious consumer behavior (Bae 2021; Zhang et al. 2021). Furthermore, it aspires to inform marketing strategies and product development initiatives that promote adopting sustainable consumption practices among diverse consumer segments.

2.2 Conceptual Background

2.2.1 Implicit Theories

Lickel et al. (2001) have identified a set of characteristics that are integral to laypeople's intuitive comprehension of groups. According to the authors, individuals derive inferences about groups and their relational patterns, which they subsequently employ to develop judgments and govern their social interactions. Implicit theories, which are a part of these lay theories, encompass

individuals' beliefs about the malleability of their own personalities and contribute towards revealing the underlying motivational and personality processes (Dweck and Leggett 1988; Park and John 2010). People use their implicit theories as a framework to comprehend not just themselves and others but also marketing entities (Chiu et al. 1997).

There are two types within this set of theories: entity theory and incremental theory. These two theories differ mainly in their self-improvement and learning concepts. Entity theorists think that they have fixed personal qualities, and it is impossible to develop these qualities by putting in their own effort. They believe they are doing well if they can show their positive personality traits to themselves and others. On the other hand, incremental theorists think that they have malleable personality qualities, and it is possible to develop these qualities by putting in their own effort. They believe that they are doing well when they get a chance to improve themselves (Dweck 2016; Dweck and Leggett 1988).

Consider, for instance, two distinct students, each representing a different self-theory: one an entity theorist, the other an incremental theorist, enrolled in the same university course. As the final examination approaches within the hour, both students hold the belief that failure is imminent. Under such circumstances, the student with an incremental mindset is likely to view the exam as an opportunity to expand their knowledge. Given the propensity of incremental theorists to focus on subject comprehension and self-improvement, they perceive participation in the exam as a valuable learning experience, even in the face of potential failure. In contrast, the student embodying the entity theory may exhibit a reluctance to engage with the final exam, operating under the assumption that the exam's outcome is predestined and that there is little to no value to be derived from their participation (Park and John 2012).

A consumer's cognitive orientation, specifically whether they are classified as an entity theorist or an incremental theorist, can significantly influence various aspects of consumption-related behavior. Implicit self-theory has been shown to affect consumers' self-perception when utilizing a product (Park and John 2010), modify their self-efficacy levels in relation to a task after employing a product (Park and John, 2014), and shape their evaluations of a brand (Mathur et al. 2022; Yin et al. 2016; Yorkston et al. 2010). Furthermore, consumers adhering to these distinct mindsets exhibit preferences for different messaging in brand advertisements (Kwon et al. 2016; Park and John 2012), evaluate brands differently based on their incorporation of plus-size models in advertisements (Cinelli and Yang 2016), and respond differently to positive or negative framing of advertisements (Jain et al. 2009; Mathur et al. 2013). Additionally, these mindsets can influence the donations received by health-oriented campaigns (Hsieh and Yucel-Aybat 2018) and alter consumers' desire for products of varying complexity (complex vs. simple) (Sharifi and Palmira 2017). These examples illustrate the multitude of dimensions in which entity and incremental theorists diverge and imply the current potential for discovering further disparities within various domains of consumer research.

A salient divergence between the entity and incremental theorists pertains to their attitudes toward self-improvement and learning, particularly in the context of product and brand selection relating to this thesis. Entity theorists tend to utilize products and brands with desirable attributes to signal their personality, leveraging the attractive features of the brand to accentuate their personal traits and manifest their positive qualities and competencies (Murphy and Dweck, 2016). For instance, entity theorists are more likely to be influenced by advertisements implying that usage of the product can project desirable traits to others, in comparison to advertisements emphasizing self-improvement (e.g., "Show off your analysis skills using this remarkable app" versus "Your

diligence will be reciprocated with enhanced analytical skills using this remarkable app") (Park and John, 2012).

Conversely, while incremental theorists may also opt for brands that project appealing personalities, such brands do not necessarily amplify the incremental theorists' inherent personal traits (Park and John, 2010). As entity theorists felt themselves smarter, more beautiful, or faster when using products from well-known brands, incremental theorists' views of themselves did not change after using a product from any certain brand, and they exhibited no differing behaviors when utilizing a brand-product or a non-brand product. This discrepancy underscores the differing psychological frameworks that entity and incremental theorists employ when engaging with product and brand narratives.

To the best of our knowledge, there are only a handful of published research articles that explore the relationship between implicit self-theory and sustainable products and materials, and they mainly explore recycled products. In their research, Bae (2021) suggested that entity theorists would perceive recycled products as worse off due to the perceived quality of recycled products. The author stated that perceived product quality mediates the effect of implicit theories on consumers' reactions to recycled products. Since entity theorists evaluate the recycled products' quality (i.e., Nike shoes made with recycled material) as lower than the conventional product (i.e., Nike shoes made with new material), they will prefer recycled products less. It is important to note that Bae's (2021) study did not investigate the perception of upcycled products or did not make a comparison of upcycled vs. recycled products.

Biraglia et al. (2017) presented their extended abstract at the ACR conference showing a relationship between implicit self-theory and recycled materials. In an experiment, participants

were asked to evaluate their purchase intentions for a standard product versus one made from recycled plastic, with a focus on measuring their type of implicit self-theory. The findings revealed a considerably higher purchasing intention among incremental theorists in comparison to entity theorists. In another experiment, researchers analyzed how consumers' perception of the company's effort to develop the product mediates the effect. They found that the perceived effort of the company in creating the recycled product influenced the type of product (recycled vs. non-recycled) consumers intended to purchase.

The respective studies, including the one conducted by Bae (2021), did not facilitate a comparative analysis between recycled and upcycled products. Neither did they examine the decision in scenarios where consumers could select between upcycled and recycled products. Furthermore, these studies did not delve into the distinct motivations that underlie the choice of either product type. This highlights a significant research gap in understanding the consumer preference dynamics between upcycled and recycled products, calling for further investigation.

This thesis employs the implicit self-theory framework to scrutinize the consumption of sustainable products, encompassing the use of recycled and upcycled products. The study aims to discern preferences that exist within the two distinct mindsets of implicit theories.

2.2.2 Upcycled and Recycled Products in Consumption Context

Upcycling is a sustainable production mode that aims to extend the old products' life. It helps to reduce waste and create a higher value for the materials which otherwise will be thrown away (Zhang et al. 2021). The guiding principle of upcycling revolves around the concept of repurposing

and transforming unwanted objects or materials into brand-new, useful products (Adigüzel and Donato 2021; Bae 2021; Kamleitner et al. 2019).

Ensuring a correct understanding of the term “upcycling” among consumers is crucial. For example, consumers may mistakenly categorize second-hand items under the upcycling term due to shared aspects of sustainability such as “reuse.” However, despite these overlapping elements, distinct differences lie in the outcome of each process. The concept of second-hand refers to the sequential use of an identical product by different consumers. Upcycling, on the other hand, involves the transformation of materials into novel products, thereby enabling consumers to utilize the same materials in a reformulated context (Kamleitner et al. 2019; Park and Lin 2020). This distinction is vital to ensure a more precise understanding of sustainable consumption practices.

The concept and the term “recycling” may sound more familiar to people than “upcycling.” Recycling is converting waste into reusable material by downgrading it into raw inputs. It is the process of turning waste into new products again (Adiguzel and Donato 2021; Bae 2021; Kamleitner et al.2019; Zhang et al.2021.) This approach also contributes to resource conservation, energy savings, and environmental sustainability, as it removes one more trash item from the environment and converts it to a usable product. Once recyclable materials are collected, they undergo a sorting process to separate them based on their type and characteristics. This step makes sure that each material is processed appropriately, maximizing the efficiency of the recycling process. After the sorting process, the products undergo another step that typically breaks them down to their raw material. This raw material can then be used to create new products (EPA 2023). Notably, the “recycled” raw material is a clean and new raw material - unused and uncontaminated - suggesting that the new products made from recycled raw materials will not show any wear &

tear. Commonly recycled materials include paper, glass, plastic, metal, and textiles (Magnier et al. 2019; Pretner et al. 2021).

Upcycling is more energy-efficient and resource-conscious than recycling, as it necessitates lower energy, material, emission, and water consumption - unlike recycled products, upcycled products utilize the material as-is, without breaking the product down to a new raw material (Kamleitner et al. 2019; Park and Lin 2020). Furthermore, upcycling can be undertaken multiple times without causing the degradation of the material into lower-value raw materials, a phenomenon known as downcycling, which is often associated with recycling practices (Wilson 2016). This highlights the versatility of upcycling as a more sustainable and environmentally friendly approach compared to traditional recycling methods (Cuc and Tripa 2018). On the other hand, despite its inherent limitations, recycling remains a fundamentally sustainable practice and is a significant improvement against inaction.

Previous research has explored various ways to increase recycling behavior. For instance, Trudel et al. (2016) posited that products linked to consumers' identities are more likely to be recycled than simply thrown into the trash. Furthermore, Schultz and Oskamp (1996) demonstrated that providing monetary incentives could bolster recycling intentions among consumers with a low level of environmental concern.

Thøgersen (2004) highlighted that offering feedback on recycling behaviors serves as an effective instrument to encourage recycling. Similarly, a study conducted by Goldenhar and Connell (1991) discovered that students living in dormitories who received feedback on their recycling actions witnessed a significant surge in their recycling rates, which was also confirmed by Katzev and Mishima (1992).

Despite these findings, the recycling rate in the United States was only 25.8% in 2015 (Winterich et al. 2019), underscoring the need for ongoing investigation into this domain. It is critical to conduct further studies to deepen our understanding of the steps necessary to promote the widespread adoption and consistent use of recycled and upcycled products. This knowledge will drive sustainable consumption practices and build a more eco-conscious society.

Similar to the sustainable consumption of recycling products within the household, consumers can also choose to purchase recycled products, and there has been research on recycled product consumption. For instance, quality expectations and purchase intention were lower for textile products than for durables and fast-moving consumer goods packages made from recycled ocean plastic (Magnier et al. 2019).

Upcycling behavior in consumption has been the subject of recent research. For instance, Yu and Lee (2019) identified upcycled products' main consumption value dimensions. They found that environmental value (green value), as well as emotional and aesthetic values, significantly influenced consumers' attitudes and purchase intentions. Kamleitner et al. (2019) demonstrated that invoking the past identity of a product, emphasizing its previous state as a broken or discarded item that contrasts with its current functional purpose, drives demand for upcycled and recycled products. Further, Bhatt et al. (2019) found that creativity positively influences the desire to purchase upcycled garments from stores. Researchers also added that individuals with a higher level of fashion consciousness are more inclined to buy upcycled garments.

Although the field of consumer behavior concerning upcycling & recycling has received some scholarly attention, there remains a significant need for further investigation. Despite the valuable

insights previously deduced, existing research still leaves some unanswered questions that merit deeper exploration.

An under-explored area within the sustainable products research corpus is the relationship between varying consumer mindsets and their preferences for specific types of sustainable products. For instance, this research could provide practical insights for a marketing executive overseeing a diverse portfolio of sustainable products. By understanding which consumers prefer which types of products, these professionals can more effectively strategize and optimize their product marketing efforts.

Given these unresolved research questions, the current study will apply the framework of implicit theories to categorize and understand distinct consumer mindsets. It is hypothesized that variations in consumers' implicit theories will influence their preferences for different types of sustainable products. The studies also seek to uncover the underlying reasons why individuals with differing implicit self-theory mindsets would opt for one sustainable product over another. By delving into these dynamics, it intends to shed light on the connections between consumer psychology and sustainable consumption patterns.

2.3 Theoretical Framework

This research will examine the direct relationship between upcycled products and product preference as an initial hypothesis. The rationale that forms the basis of the first hypothesis is based on the suggestion that upcycled products contribute to sustainability without compromising other desirable product attributes. Prior research has shown that consumers hold positive attitudes towards recycled products; however, the extent of these positive attitudes can vary depending on

the product category, such as personal hygiene products (Hamzaoui-Essoussi and Linton 2010; Magnier et al. 2019; Mobley et al. 1995). In the current study, we anticipate observing a positive attitude toward upcycled products. Furthermore, we expect this behavior to be evident among both entity theorists (who believe traits and characteristics are fixed) and incremental theorists (who believe traits and characteristics can be developed or changed through effort and learning).

This discussion results in the first hypothesis: Consumers prefer upcycled products more than conventional equivalents. This preference can be attributed to two primary reasons. Firstly, by choosing the upcycled product, consumers perceive themselves as making a sustainable purchase and supporting an environmental cause, aligning their behavior with their environmental values. Upcycled products have the added character of being more sustainable due to the reuse of materials from other products. Upcycling uses discarded materials to create new products to reduce waste and minimize the environmental impact of production processes (Pandit et al. 2019). Secondly, consumers perceive the upcycled product as offering greater value, as it embodies the transformation of discarded materials into new and valuable items.

H1: *Upcycled products (vs. conventional products) will be preferred more*

One of this research's main aims is to investigate consumer preferences between upcycled and recycled products. Two pretests and three studies investigated these preferences. Notably, the extant literature on this subject remains sparse, with the influential work by Adiguzel and Donato (2021) serving as a key reference. Their investigation delved into consumer preferences towards upcycled versus recycled luxury items, analyzing factors such as pride, novelty, perceived contamination, environmental concern, and whether the brand is new or already existing. Specifically, this thesis will utilize the two types of implicit theories to categorize consumers based

on their mindset and beliefs about the malleability of personality traits (Dweck 2016; Hong et al. 1999; Park & John 2010).

The distinction between recycled and upcycled products lies in their use of raw materials. While recycled products are made from virgin raw materials that have not been previously used, upcycled products utilize materials from old products without breaking them down. Incremental theorists are likely to view upcycled products as an improvement over their original form, as prior studies have shown that upcycled products exhibit improved aesthetics, uniqueness, and other distinct qualities when compared to the original product material (Belz and Binder 2015; Paras and Curteza 2018; Sung 2015). Consequently, as stated previously, the upcycled material transforms into a novel product, a process suggestive of enhancement, improvement, and added value. Such a perspective resonates strongly with the mindset of an incremental theorist, who perceives traits and abilities as malleable and improvable (Burnette et al. 2013). Therefore, incremental theorists would likely exhibit a stronger preference for upcycled products:

H2: *Upcycled products (vs. recycled products) will be preferred more by incremental theorists*

Entity theorists may align with the idea of recycling rather than upcycling due to the nature of the processes. In the recycling process, the focus is on making new materials rather than seeking improvements in their original state (Adiguzel and Donato 2021; Bae 2021). This aligns with the perspective of entity theorists, as they may see recycled products as new stable attributes of the materials. Therefore, considering the belief system of entity theorists, who prioritize stability and fixed attributes, it is plausible to suggest that they lean towards recycled products rather than upcycled ones:

H3: *Recycled products (vs. upcycled products) will be preferred more by entity theorists*

Incremental theorists believe in incremental change through improvement, and the primary objective of upcycling is to enhance the original material's value while creating a novel product (Belz and Binder 2014; Sung 2015). This notion of enhancement is likely to resonate with incremental theorists when evaluating such products; however, it is crucial to note that this enhancement needs to be communicated.

The present research posits that individuals with an incremental theory will prefer upcycled products more when the description incorporates cues that emphasize its improved characteristics. These cues will focus on the product's improvement and consumer learning. Moreover, it is hypothesized that incremental theorists will perceive upcycled products as having undergone more significant improvements than entity theorists. This prediction is established by the notion that incremental theorists believe that progress is achievable through effort, which is not a tenet that entity theorists uphold.

H4: *Incremental theorists (vs. entity theorists) will prefer upcycled products more when the product is described using cues that emphasize improvement.*

Park and John (2012) suggested that when advertising brands with distinct personalities, the choice of appeal that resonates most with consumers can be shaped by their implicit theories. Associating a product with a desirable personality trait (such as sophistication or intelligence) can be appealing because it either signals that the consumer possesses the same trait or allows individuals to learn and adopt those traits.

Individuals who hold entity theories respond favorably to product advertising with a signaling appeal (Mathur et al. 2016; Park and John 2012). Entity theorists actively seek opportunities to signal their desired qualities as a means of self-enhancement. Thus, information that emphasizes the opportunity for consumers to signal their possession of appealing personality traits through the presented product resonates best with entity theorists. In the subsequent hypothesis, it is expected that this line of reasoning to extend to the context of upcycled products.

H5: *Entity theorists (vs. incremental theorists) will prefer upcycled products more when the product is described using cues that emphasize signaling.*

The studies in the next section will explain how these hypotheses were initially tested.

2.4 Studies

2.4.1 Pretest 1

The definitions of upcycling and recycling were incorporated in the upcoming studies due to the results of a pretest that was conducted. The pretest revealed no uniform comprehension of these terminologies among the participants. Notably, the term ‘upcycling’ necessitated clarification.

150 participants were recruited in Prolific in exchange for money. Participants were randomly assigned into two groups. The first group answered two questions: “what is your understanding of the term ‘upcycling’?” and “give an example of an upcycled product.” The second group answered: “what is your understanding of the term ‘recycling’?” and “give an example of a recycled product.” Then an overall and an in-depth analysis was done on all the answers to the questions.

In the upcycling condition, even though some of the participants utilized major upcycling keywords such as “reuse” (15 participants) or “repurpose” (8 participants), it was visible from their “upcycled product” examples that the definition of upcycling was not clear or uniform across most of the participants (i.e., “Upcycled chest of drawers. Sanded, repainted duck egg blue and knobs changed. Great idea to update vintage products”, “you could upcycle a dining chair, by putting new cushions on and new fabric to give it a new lease of life”, “I have a plant pot that a business recovered from going into landfill. It has been repainted and changed and now although it is still a plant pot it is refreshed. I like it.”)

Answers were more coherent and uniform in the recycling condition than the upcycling condition (i.e., “shampoo bottle recycled from plastic,” “My supermarket bag for life is mostly made from recycled plastic.”) Although only a limited number of participants were unable to give a satisfactory example of a recycled product, such as “cardboard” or “using old jars and tins for storage purposes,” we deemed it essential to establish a uniform understanding of the term among all participants.

2.4.2 Study 1

Design: This study had a Implicit theory (entity vs. incremental) x Product type (upcycled vs. conventional) between-subjects design.

Procedure: 200 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups: entity and incremental theorists. According to their group assignment, they were shown one of the two texts for implicit self-theory manipulation.

Before reading the text, participants were informed that they would be tested on how well they remembered the concepts in the text. After reading the text, participants were asked to answer three questions: “What is the name of convention mentioned in the article?”, “Briefly indicate what the main point of the article was” and “Briefly describe an example of an event in your life that is consistent with or is representative of what as written in the article you just read.”

Then, participants were randomly assigned into two groups: upcycled product and conventional product - in both conditions, a backpack was used. According to their group assignments, they were shown a text containing the product's description and a picture of the described product. In the upcycled product condition, the description included what upcycling is (See Appendix). The pictures of the backpack were the same for both groups, but the description differed. Throughout this thesis, when the term conventional product is used, the product refers to a standard or traditional product that is commonly available in the market and follows established norms, specifications, and features (Hidalgo-Baz et al. 2017; Markeset and Kumar 2004). The conventional product is typically produced using conventional manufacturing methods and materials without significant deviations or innovations.

The product liking (“how much did you like the new pack?” 1= ”not at all,” and 7 = “very much”) and participants’ purchase intention (“how much will you consider buying the new backpack?” 1= ”not at all,” and 7 = “very much”) were assessed.

Perceived product contamination was measured with three items (“the new backpack is...” 1= ”contaminated,” and 7 = “pure,” 1= ”dirty,” and 7 = “clean,” 1= ”dangerous,” and 7 = “safe”) (Meng and Leary 2019) and environmental concern with six items (“It is important to me that the products I use do not harm the environment,” “I consider the potential environmental impact of

my actions when making many of my decisions,” “My purchase habits are affected by my concern for our environment,” “I am concerned about wasting the resources of our planet,” “I would describe myself as environmentally responsible,” “I am willing to be inconvenienced in order to take actions that are more environmentally friendly.” For all items 1= “strongly disagree,” and 7 = “strongly agree”) (Haws et al. 2014)

Manipulation check items for the belief in entity versus incremental theories were adapted from the Implicit Persons Theory Measure (Chiu et al. 1997; Levy et al.1998), and they were measured on a Likert scale from 1 (strongly disagree) to 6 (strongly agree). Three items were used: “The kind of person someone is something very basic about him or her, and it can’t be changed very much,” “People can do things differently, but the important parts of who they are can’t really be changed,” “Everyone is a certain kind of person, and there is not much that be done to really change that.”

2.4.2.1 Results

One participant was excluded from the data analysis due to their answers to the manipulation questions. They answered respectively, “I can’t remember,” “It was in regards to the dr” and “I’m unable to do this at the moment”)

Manipulation check: Participants appeared to perceive the implicit theory manipulation as intended. The three items on the implicit theory scale ($M=3.3$, $SD= 1.2$, $\alpha = .89$) were averaged, and higher scores indicated a stronger entity belief. The average scores of the implicit theory scale as the dependent variable and implicit theory manipulation as the independent variable along with product type showed that participants in the entity theory condition were more likely than those in the incremental theory condition to believe that people can’t change very much, which indicated

that the implicit theory manipulation had worked. ($M_{\text{entity}} = 3.70$, $M_{\text{incremental}} = 2.85$, $F(1,195) = 28.28$, $p < .001$)

One question was asked to understand whether the product definitions created a sustainability perception (“the production process of the new backpack is sustainable” 1= “not at all sustainable,” and 7= “very sustainable”) In upcycled product condition (vs. conventional product) participants indicated a higher score for this item, which showed that the product manipulation worked ($M_{\text{upcycled}} = 5.71$, $M_{\text{conventional}} = 4.87$, $F(1,195) = 24.86$, $p < .001$)

Perceived contamination scale ($M=5.4$, $SD= .94$, $\alpha = .74$) and environmental concern scale ($M=5.2$, $SD=1.2$, $\alpha = .94$) were used as covariates, since perceived contamination of the upcycled and recycled products could affect people’s purchase intention and product liking (Adiguzel and Donato 2021, Meng and Leary 2019.) Similarly, environmental concern affects sustainable behavior (Haws et al.2014; Mukherjee and Chandra 2021.)

Dependent variables: Product liking: 2x2 ANOVA was conducted. Product type had a positive main effect on product liking (Product liking: $M_{\text{upcycled}} = 4.45$, $M_{\text{conventional}} = 3.44$; $F(1,193) = 19.56$, $p < .001$, $\eta=.30$). Implicit self-theory had no main effect on product liking (Product liking: $F(1,193) = .510$, $p = .476$, $\eta=.05$). There was no significant implicit theory x product type interaction ($F(1,193) = .464$, $p = .497$, $\eta=.04$). Both covariates perceived contamination ($F(1,193) = 16.52$, $p < .001$) and environmental concern ($F(1,193) = 4.30$, $p = .040$) were significant predictors on product liking.

Purchase intention: 2x2 ANOVA was conducted. Product type had a positive main effect on purchase intention (Purchase intention: $M_{\text{upcycled}} = 3.97$, $M_{\text{conventional}} = 2.95$; $F(1,193) = 18.59$, $p < .001$, $\eta=.30$). Implicit self-theory had no main effect on purchase intention (Purchase intention:

$F(1,193) = 1.133, p = .288, \eta^2 = .08$). There was no significant implicit theory $\times$ product type interaction ($F(1,193) = .737, p = .392, \eta^2 = .06$). Both covariates perceived contamination ($F(1,193) = 10.83, p = .001$) and environmental concern ($F(1,193) = 8.96, p = .003$) were significant predictors on purchase intention.

2.4.2.2 Discussion

In Study 1, the results indicate a clear preference for upcycled products over conventional products amongst both entity and incremental theorists. This observation supports our initial hypothesis (H1) that individuals, regardless of their mindset orientation, would be more inclined towards upcycled products than their conventional counterparts.

Having shown that upcycled products are preferred more than conventional products, it is equally important to ascertain the preferences of both entity and incremental theorists with respect to upcycled and recycled products. Therefore, the next study has been designed to address this comparison.

2.4.3 Study 2

Design: This study had a Implicit theory (entity vs. incremental) $\times$ Product type (upcycled vs. recycled) between-subjects design.

Procedure: 200 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups: entity and incremental theorists. According to their group assignment, they were shown one of the two texts for implicit theory manipulation. The manipulation and its related questions were the same as those used in Study 1.

Then, participants were randomly assigned into two groups: upcycled product and recycled product - in both conditions, a backpack was used. According to their group assignments, they were shown a text containing the product's description and a picture of the described product, similar to Study 1 (See Appendix). The pictures were the same for both groups, but the description differed.

The product liking (“how much did you like the new pack?” 1= “not at all,” and 7 = “very much”) and participants’ purchase intention (“how much will you consider buying the new backpack?” 1= “not at all,” and 7 = “very much”) were assessed. Perceived product contamination was measured with three items (same as Study 1) (Meng and Leary 2019) and environmental concern with six items (same as Study 1) (Haws et al. 2014). A question was also posed to understand whether the product definitions were well understood regarding the change in product within the two processes (“The recycling / upcycling production process of the new backpacks changed the truck tarps.” 1= “not at all changed,” and 7 = “ very much changed”).

2.4.3.1 Results

Two participants were excluded from the data analysis because of failing the attention checks.

Manipulation check: Participants appeared to perceive the implicit theory manipulation as intended. The three items on the implicit theory scale ($M=3.5$, $SD=1.6$, $\alpha = .89$) were averaged, and higher scores indicated a stronger entity belief. Same as in study 1, the manipulation worked. ($M_{\text{entity}} = 3.89$, $M_{\text{incremental}} = 3.16$, $F(1,194) = 21.05$, $p < .001$)

The question about whether the product definition clarified change in the product tested if the definitions for upcycling and recycling explained how differently they treat the initial object, and

whether the material went through a transform or not. A higher score in this question means that the process changed the materials a lot, similar to the recycling process. In the recycled product condition, a higher score was produced, which showed that the product manipulation worked ($M_{\text{upcycled}} = 4.48$, $M_{\text{recycled}} = 5.90$, $F(1,194) = 37.92$, $p < .001$)

Perceived contamination scale ($M=5.5$, $SD=1.09$, $\alpha = .80$) and environmental concern ($M=5.2$, $SD=1.7$, $\alpha = .94$) were used as covariates.

Dependent variables: Product Liking: 2 x 2 ANOVA was conducted. Product type had no main effect on product liking (Product liking: $F(1,192) = .163$, $p = .687$, $\eta=.03$). Implicit self-theory had no main effect on product liking (Product liking: $F(1,192) = .036$, $p = .850$, $\eta=0$). There was a marginally significant implicit theory x product type interaction ($F(1,192) = 3.60$, $p = .059$, $\eta=0.13$). Both perceived contamination ($F(1,192) = 11.35$, $p < .001$) and environmental concern ($F(1,192) = 14.11$, $p < .001$) were significant predictors of product liking.

Purchase intention: Product type had a marginally significant effect on purchase intention (Purchase intention: $F(1,192) = 3.27$, $p = .072$, $\eta=.13$). Implicit self-theory had no main effect on purchase intention (Purchase intention: $F(1,192) = .011$, $p = .917$, $\eta=0$). There was a significant implicit theory x product type interaction ($F(1,192) = 6.42$, $p = .012$, $\eta=0.18$). The purchase intention of entity theorists was significantly higher for recycled products than upcycled products ($M_{\text{upcycling}}=3.35$, $M_{\text{recycling}}=4.30$, $F(1,192)=9.30$, $p=.003$), whereas the purchase intention of incremental theorists was not significantly different between recycled and upcycled products ($M_{\text{upcycling}}=3.88$, $M_{\text{recycling}}=3.71$, $F(1,192)=.275$, $p=.601$.) Both perceived contamination ($F(1,192) = 12.81$, $p < .001$) and environmental concern ($F(1,192) = 27.46$, $p < .001$) were significant predictors of purchase intention.

2.4.3.2 Discussion

Study 2 examined the influence of implicit self-theory on liking concerning upcycled and recycled products. The results indicate that the overall liking between these two types of sustainable products was only marginally significant, implying that a more comprehensive investigation is necessary to explore this relationship. Additionally, Study 2 demonstrated a statistically significant interaction effect between sustainable product type and implicit self-theory. Specifically, entity theorists demonstrated a greater purchase intention towards recycled products compared to upcycled products, whereas no discernible impact was observed between upcycled and recycled products among incremental theorists. Notably, this study presented each participant with only one type of sustainable product (upcycled or recycled); they did not have the option to compare them side-by-side.

Study 2 revealed that entity theorists are more inclined to purchase recycled products compared to upcycled products, raising the question of whether differences in perceived prices between recycled and upcycled products could account for this preference. Price is one of the main determinants on a purchase, and recycled products may have a higher perceived price tag (Essoussi and Linton 2010). Entity theorists may use such high-price products to signal their economic status, which may cause entity theorists to prefer recycled over upcycled products. In the subsequent studies, the price difference between upcycled and recycled products and its possible impact on purchase intentions and liking will be investigated to analyze whether the price would be a differentiating factor when deciding between them.

As a follow-up step, this research examines the preferences of entity vs. incremental theorists concerning upcycled, recycled, and conventional products. In the forthcoming study, all three

types of products will be presented to each participant simultaneously instead of showing only one type of product to each participant. Additionally, to diminish the impact of price perception, the next study will specify that price will be constant across different products.

2.4.4 Pretest 2

Design: This study had Implicit theory (entity vs. incremental) and product type (upcycled, recycled, and conventional) between-subjects design.

Procedure: 122 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups: entity and incremental theorists. According to their group assignment, they were shown one of the two texts for implicit theory manipulation. The manipulation and related questions were the same as those used in Study 1.

Then one question asked participants to imagine that they needed to buy a backpack and they could buy this backpack with three different types of manufacturing methods. They are provided the descriptions of each manufacturing method: upcycling, recycling, and conventional. The perception of price regarding recycled and upcycled products has the potential to impact individuals with entity and incremental theories. To mitigate this influence, the question explicitly stated that the manufacturing methods would not affect the price of the backpack. This clarification aimed to ensure that participants evaluated the manufacturing methods independent of their anticipated price. Then the question concluded by asking which manufacturing method participants would prefer for their backpack (See Appendix).

2.4.4.1 Results

120 participants were recruited in Prolific, but because of a technical glitch, 122 participants completed the survey.

Manipulation check: Participants appeared to perceive the implicit theory manipulation as intended. The three items on the implicit theory scale ($M=3.2$, $SD=1.3$, $\alpha = .94$) were averaged, and higher scores indicated a stronger entity belief. Same as in study 1, the manipulation worked. ($M_{\text{entity}} = 3.65$, $M_{\text{incremental}} = 2.84$, $F(1,120) = 13.45$, $p < .001$)

Dependent variables: Product type is used as the dependent variable. In this analysis, there are two nominal variables. These variables are implicit theory (entity theorists vs. incremental theorists), along with their choice of product type (upcycled, recycled, and conventional). Crosstabulation is frequently used to analyze the relationship between nominal variables.

Chi-square tests of independence are used to understand relationships between independent nominal variables (Lynch 2013; Weisburd and Britt 2007). The Pearson Chi-Square value under “Asymptotic Significance” in the Chi-Square Tests output in SPSS should be less than or equal to the alpha level (.05) for the test to be significant. The relationship between these variables was marginally significant ($X^2([2], N = 122) = [4.70]$, $p = .095$). Results showed that within incremental theorists, 46% (29) of the participants chose the upcycled product, 38.1% (24) chose the recycled product, and 15.9% (10) chose the conventional product. On the other hand, within entity theorists, 30.5% (18) of the participants chose the upcycled product, 57.6% (34) chose the recycled product, and 11.9% (7) chose the conventional product.

2.4.4.2 Discussion

In Pretest 2, the study was conducted to determine whether a preference for a particular product type could be discerned between the entity and incremental theorists when presented with a choice. A marginally significant relationship was observed between these two nominal variables. Notably, the conventional product was the least preferred among these three manufacturing methods (recycled, upcycled, and conventional). This result supported H1, as consumers preferred upcycled products more than conventional ones.

Given the primary focus of this research on understanding implicit self-theory and upcycled/recycled products, Pretest 2 also showed a preference between upcycled and recycled products. Entity theorists preferred recycled products more than upcycled products, and incremental theorists preferred upcycled products more than recycled ones, which provides preliminary marginal support for H2 and H3. This research continues to analyze the sustainable product type differences with further studies.

In the next study (Study 3), the preference of entity vs. incremental theorists for upcycled and recycled products is measured, including the perceived price of the two sustainable product types. Study 3 also presents both types of sustainable products to participants at the same time so they have a chance to compare the two types side-by-side.

2.4.5 Study 3

Design: This study had Implicit theory (entity theorists vs. incremental theorists) and product type (upcycled and recycled) between-subjects design.

Procedure: 200 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups: entity and incremental theorists. According to their group assignment, they were shown one of the two texts for implicit theory manipulation. The manipulation and its related questions were the same as those used in Study 1. The participants were presented with a hypothetical scenario in which they were required to purchase a backpack, with the option of choosing between two different manufacturing methods: upcycling and recycling. The participants were provided with descriptions of each method and told that the backpacks produced by both methods had the same price. Then they were asked to choose their preferred manufacturing method. This was followed by an additional question aimed at understanding their perception of price with regard to the two different mindsets of the implicit self-theory. Participants were then shown an image of the backpack and asked to imagine that it was manufactured using their selected process.

2.4.5.1 Results

One of the participants was excluded from the data analysis because of failing the attention checks.

Manipulation check: Participants appeared to perceive the implicit theory manipulation as intended. The three items on the implicit theory scale ($M=3.3$, $SD=1.1$, $\alpha = .90$) were averaged, and higher scores indicated a stronger entity belief. Same as in Study 1, the manipulation worked. ($M_{\text{entity}} = 3.62$, $M_{\text{incremental}} = 2.93$, $F(1,197) = 20.68$, $p < .001$)

Dependent variable: A chi-square test of independence was executed to evaluate the relationship between implicit theory and product type. Similar to Pretest 2, we conducted a Chi-Square test.

The relationship between these variables was significant ($X^2([1], N = 199) = [4.22], p = .040$). Incremental theorists were more likely to choose upcycled products than recycled products. Entity theorists were more likely to choose recycled products than upcycled products.

Results showed that within incremental theorists, 60% (60) of the participants chose the upcycled product, and 40% (40) chose the recycled product. On the other hand, within entity theorists, 45.5% (45) of the participants chose the upcycled product, and 54.5% (54) chose the recycled product.

Price: 2x2 ANOVA was conducted. Product type had no main effect on price (Price: $M_{\text{upcycled}} = 66.99$, $M_{\text{recycled}} = 61.69$; $F(1,195) = .616$, $p = .434$, $\eta = .05$). Implicit self-theory had no main effect on price (Price: $M_{\text{entity}} = 66.84$, $M_{\text{incremental}} = 61.85$; $F(1,195) = .545$, $p = .461$, $\eta = .05$). There was no significant implicit theory x product type interaction ($F(1,195) = .192$, $p = .661$, $\eta = .03$).

2.4.5.2 Discussion

Study 3 investigated the relationship between implicit theory mindset and two sustainable product types, namely upcycled and recycled. Participants were presented with both product types simultaneously and asked to make a choice. Given that price may be a plausible reason for choosing a particular product, the study maintained a constant price for both manufacturing methods to diminish the effect of any possible perceived price difference between recycled and upcycled products. Then a query was presented to ascertain the perceived price for both product types. The results indicated that both entity and incremental theorists considered the backpack's price to be similar, supporting our price-difference control statement.

As predicted by H2 and H3, entity theorists exhibited a greater preference for recycled products, whereas incremental theorists demonstrated a greater preference for upcycled products. This finding is in line with the previous hypotheses.

A significant relationship was identified between implicit theory and the product type in this study, with backpacks being used as an example of upcycled and recycled products. In the following study, a jacket is used instead of a backpack to assess if this effect is replicable across different product categories.

2.4.6 Study 4

Design: This study had Implicit theory (entity theorists vs. incremental theorists) and product type (upcycled and recycled) between-subjects design.

Procedure: 200 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups: entity and incremental theorists. According to their group assignment, they were shown one of the two texts for implicit theory manipulation. The manipulation and related questions were the same as those used in Study 1.

In this study, participants were asked to imagine that they needed to purchase a jacket and were given the option of choosing between two different manufacturing methods: upcycling and recycling. Descriptions of each method were provided to the participants. The main difference between Study 3 and Study 4 was the product being shown - in Study 3, a backpack was used, whereas in Study 4, a jacket was used instead.

After the participants selected their preferred product type, an additional question was included to measure their price perception based on the two different mindsets of the implicit self-theory. The participants were shown an image of a jacket (see Appendix) and asked to imagine that the jacket was manufactured using their selected manufacturing process (upcycled or recycled). The participant was informed that the price of the products that went through different manufacturing methods are the same. Then, a question about the product's price was asked. In Study 3, the following question was asked: "How much do you think this backpack (jacket) is?", while in Study 4, the question was changed to: "How much are you willing to pay for this jacket?". This change in the question type was made to establish possible differences between the different products from a perspective of both perceived price and willingness to pay (WTP).

The rest of the flow is the same as in Study 3.

2.4.6.1 Results

Manipulation check: Participants appeared to perceive the implicit theory manipulation as intended. The three items on the implicit theory scale ($M=3.3$, $SD=1.2$, $\alpha = .88$) were averaged, and higher scores indicated a stronger entity belief. Same as in Study 1, the manipulation worked. ($M_{\text{entity}} = 3.71$, $M_{\text{incremental}} = 2.87$, $F(1,198) = 29.15$, $p < .001$)

Dependent variable: A chi-square test of independence was executed to evaluate the relationship between implicit theory and product type. Similar to Study 3, we conducted a Chi-Square test.

The relationship between these variables was significant ($X^2([1], N = 200) = [5.17]$, $p = .023$). Incremental theorists were more likely to choose upcycled products than recycled products. Entity theorists were more likely to choose recycled products than upcycled products.

Results showed that within incremental theorists, 63% (63) of the participants chose the upcycled product, and 37% (37) chose the recycled product. On the other hand, within entity theorists, 47% (47) of the participants chose the upcycled product, and 53% (53) chose the recycled product.

Price: 2x2 ANOVA was conducted. Product type had no main effect on price (Price: $M_{\text{upcycled}} = 46.18$, $M_{\text{recycled}} = 36.43$; $F(1,196) = 2.413$, $p = .122$, $\eta^2 = .10$). Implicit self-theory had no main effect on price (Price: $M_{\text{entity}} = 42.09$, $M_{\text{incremental}} = 40.53$; $F(1,196) = .062$, $p = .804$, $\eta^2 = .00$). There was no significant implicit theory x product type interaction ($F(1,196) = 1.180$, $p = .279$, $\eta^2 = .08$).

2.4.6.2 Discussion

Similar to Study 3, Study 4 investigated the relationship between implicit theory mindset and two sustainable product types, namely upcycled and recycled. Participants were presented with both product types simultaneously and asked to make a choice. The primary difference between Study 3 and Study 4 was the product category, with backpacks used in Study 3 and jackets used in Study 4.

Instead of asking for the perceived price of the product, this study assessed participants' price they were willing to pay. As jackets were introduced for the first time in this research, the study aimed to determine participants' WTP for different implicit theory mindsets. The results from the WTP questions for implicit theory and the product type showed that the difference was not significant, demonstrating the validity of the product description and its related statement on how the price is the same across products.

Consistent with H2 and H3 and the results of Study 3, a significant relationship was found between implicit theory and the product type. Entity theorists exhibited a stronger preference for recycled

products than upcycled products, whereas incremental theorists demonstrated a stronger preference for upcycled products than recycled products. Both studies supported H2 and H3 with different products, suggesting that the results may be generalizable to a wider range of products.

The results from previous studies have provided support for the hypotheses proposed in this research. To further understand the impact of sustainable products on consumer behavior, the next three studies will explore the influence of product descriptions on upcycled products and the level of sustainable materials used in the products. Study 5 will investigate the effect of improvement cues in the product description on consumer preferences. In contrast, Study 6 will investigate the effect of signaling cues in the product description on consumer preferences. While Study 7 will examine how the level of sustainable materials used in the products affects consumers' choices. These studies will contribute to a deeper understanding of how different factors influence consumer preferences for sustainable products.

2.4.7 Study 5

Design: This study had Implicit theory (entity theorists vs. incremental theorists) and Upcycled product with an Improvement cue between-subjects design.

Procedure: 100 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups: entity and incremental theorists. According to their group assignment, they were shown one of the two texts for implicit theory manipulation. The manipulation and related questions were the same as those used in Study 1.

Then all participants were shown a text and a picture of the described upcycled product. The upcycled product description is the same as in Study 1. However, an additional text is added to

highlight the improvement and learning that should appeal to incremental theorists more than entity theorists. The improvement cues for product descriptions are adapted from Park and John (2012) (see Appendix).

Study 5 did not include any statements regarding the price. Then the purchase intention, product liking, and participants' perceived price were assessed. Also, perceived product contamination was measured using three items (same as Study 1) (Meng and Leary 2019), and environmental concern was measured using six items (same as Study 1) (Haws et al. 2014). A question was also included to understand whether the truck tarps are improved to make a backpack in different levels of the implicit theory ("Upcycling production process of the new backpacks improved the truck tarps." 1= "not at all changed," and 7 = "very much changed").

2.4.7.1 Results

Two of the participants were excluded from the data analysis because of failing the attention checks.

Manipulation check: Participants appeared to perceive the implicit theory manipulation as intended. The three items on the implicit theory scale ($M=3.2$, $SD=1.6$, $\alpha = .90$) were averaged, and higher scores indicated a stronger entity belief. Same as in Study 1, the manipulation worked. ($M_{\text{entity}} = 3.53$, $M_{\text{incremental}} = 2.87$, $F(1,96) = 8.61$, $p = .004$).

The question assesses ("The upcycling production process of the new backpack improved the truck tarps") whether the upcycling process improved the truck tarps showed that product description with improvement cues affected the incremental theorists more than the entity theorists. The

implicit self-theory had a significant effect on truck tarp improvement ($M_{\text{entity}} = 3.85$, $M_{\text{incremental}} = 4.82$; $F(1,94) = 6.58$, $p = .012$, $\eta^2 = .25$).

Perceived contamination scale ($M=5.3$, $SD= 1.04$, $\alpha = .75$) and environmental concern scale ($M=4.7$, $SD=1.2$, $\alpha = .93$) were used as covariates, since perceived contamination of the upcycled products could affect people's preferences (Adiguzel and Donato 2021; Meng and Leary 2019.) Similarly, environmental concern affect sustainable behavior (Haws et al.2014; Mukherjee and Chadra 2021.)

Dependent variables: Purchase intention: One factorial design was conducted. Implicit self-theory had a significant effect on purchase intention (Purchase intention: $M_{\text{entity}} = 3.26$, $M_{\text{incremental}} = 3.93$; $F(1,94) = 4.20$, $p = .043$, $\eta^2 = .20$). With the improvement cues in the product description, incremental theorists had higher purchase intention than entity theorists towards the upcycled product. Both covariates perceived contamination ($F(1,94) = 5.22$, $p = .025$) and environmental concern ($F(1,94) = 5.81$, $p = .018$) were significant predictors of purchase intention.

Product liking: Implicit theory had a marginally significant effect on product liking (Product liking: $M_{\text{entity}} = 4.01$, $M_{\text{incremental}} = 4.48$; $F(1,94) = 3.01$, $p = .086$, $\eta^2 = .18$). With the improvement cues in the product description, incremental theorists had marginally higher product liking than entity theorists towards the upcycled product. Both covariates perceived contamination ($F(1,94) = 9.74$, $p = .002$) and environmental concern ($F(1,94) = 6.16$, $p = .015$) were significant predictors of product liking.

Price: The implicit self-theory had no main effect on price (Price: $M_{\text{entity}} = 76.43$, $M_{\text{incremental}} = 75.06$; $F(1,96) = .028$, $p = .867$, $\eta^2 = .00$).

2.4.7.2 Discussion

Study 5 was conducted to investigate the influence of improvement cues in upcycled product descriptions on the product preferences of individuals with different implicit theory mindsets. Participants were presented with an upcycled product description that emphasized the product's improvements, and subsequently, their preferences were measured.

The results indicated that incremental theorists showed a stronger preference for upcycled products when the product description highlighted its "improved" features, as compared to entity theorists. Furthermore, incremental theorists perceived product improvement as higher than entity theorists, providing support for H4 defined in the present research. This disparity in attitudes towards self-improvement is a well-established phenomenon in the literature on implicit theories (Dweck and Leggett 1988; Park and John 2012). Study 5 highlights the importance of additional research to investigate the impact of product improvement, an area that has received relatively less attention to the best of our knowledge.

Results also showed that the perceived price between the two implicit theories is not significantly different.

2.4.8 Study 6

Design: This study had Implicit theory (entity theorists vs. incremental theorists) and Upcycled product with Signaling cue between-subjects design.

Procedure: 100 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups: entity and incremental theorists. According to their group assignment, they were shown one of the two texts for implicit theory manipulation. The manipulation and related questions were the same as those used in Study 1.

Then all participants were shown a text and a picture of the described upcycled product. The upcycled product description is the same as in Study 1. However, an additional text is added to highlight the opportunities to signal good qualities with the product which should appeal to entity theorists more than the incremental theorists. The signaling cues for product description are adapted from Park and John (2012) (see Appendix).

Study 6 did not include any statements regarding price. The purchase intention, product liking, and participants' perceived price were assessed. Perceived product contamination was also measured using three items (same as Study 1) (Meng and Leary 2019), and environmental concern was measured using six items (same as Study 1) (Haws et al. 2014).

2.4.8.1 Results

One of the participants was excluded from the data analysis because of a technical glitch; the participant could not finish the study.

Manipulation check: Participants appeared to perceive the implicit theory manipulation as intended. The three items on the implicit theory scale ($M=3.2$, $SD=1.1$, $\alpha = .87$) were averaged, and higher scores indicated a stronger entity belief. Same as in study 1, the manipulation worked. ($M_{\text{entity}} = 3.46$, $M_{\text{incremental}} = 2.97$, $F(1,97) = 4.59$, $p = .035$).

Perceived contamination scale ($M=5.0$, $SD= 1.2$, $\alpha = .82$) and environmental concern scale ($M=4.8$, $SD=1.2$, $\alpha = .94$) were used as covariates, since perceived contamination of the upcycled

products could affect people's preferences (Adiguzel and Donato 2021; Meng and Leary 2019.) Similarly, environmental concern affect sustainable behavior (Haws et al.2014; Mukherjee and Chadra 2021.)

Dependent variables: Product liking: One factorial design was conducted. Implicit self-theory had a significant effect on product liking (Product liking: $M_{\text{entity}} = 4.05$, $M_{\text{incremental}} = 3.32$; $F(1,95) = 5.52$, $p = .021$, $\eta^2 = .48$). Entity theorists, who had signaling cues in their product description, had higher product liking than incremental theorists, who had signaling cues in their product description, towards to upcycled product. Environmental concern ($F(1,95) = 10.87$, $p = .001$) was a significant predictor of product liking, but perceived contamination ($F(1,95) = 2.56$, $p = .113$) was not a significant predictor of product liking.

Purchase intention: One factorial design was conducted. Implicit self-theory had not a significant effect on purchase intention (Purchase intention: $M_{\text{entity}} = 3.37$, $M_{\text{incremental}} = 2.93$; $F(1,95) = 4.37$, $p = .178$, $\eta^2 = .14$). Environmental concern ($F(1,95) = 13.09$, $p < .001$) was a significant predictor of purchase intention, but perceived contamination ($F(1,95) = .085$, $p = .772$) was not a significant predictor of purchase intention.

Price: The implicit self-theory had no main effect on price (Price: $M_{\text{entity}} = 76.31$, $M_{\text{incremental}} = 85.50$; $F(1,97) = .781$, $p = .379$, $\eta^2 = .09$).

2.4.8.2 Discussion

Study 6 was conducted to investigate the influence of signaling cues in upcycled product descriptions on the product preferences of individuals with different implicit theory mindsets.

Participants were presented with an upcycled product description that emphasized the signaling opportunities, and subsequently, their preferences were measured.

The results indicated that entity theorists showed a higher product liking for upcycled products when the product description highlighted its signaling features, compared to incremental theorists, providing support for H5. Purchase intention was not significantly higher for entity theorists than incremental theorists, but further studies could be conducted to understand the relationship better. Results also showed that the perceived price between the two implicit theories is not significantly different.

The next study will explore the effect of different levels of sustainable materials used while making the product. In manufacturing, many diverse components and materials are combined to generate the final product, and to move towards more sustainable practices, any of these components or materials can be sourced from sustainable sources, such as upcycled fabric or recycled plastic. Additionally, the integration of upcycled materials has gained popularity as an effective method of mitigating waste and advancing sustainability (Pandit et al. 2020). In order to ensure external validity, Study 7 will examine how different percentages of upcycled materials incorporated into the product impact the product preference between the two implicit theory mindsets.

2.4.9 Study 7

Design: This study had Implicit theory (entity theorists vs. incremental theorists) and upcycled product percentage (%50 upcycled and %80 upcycled) between-subjects design.

Procedure: 200 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups: entity and incremental theorists. According to their group assignment, they were shown one of the two texts for implicit theory manipulation. The manipulation and related questions were the same as those used in Study 1.

In the study, participants were asked to imagine that they needed to purchase a jacket and they were presented with two options for differing upcycled product content. Descriptions of each option were provided, with one option using %50 upcycled materials and the other using 80% upcycled materials during production. Scherer et al. (2018) also used different percentages of bio-based plastics in a sustainable product in their experiments. The percentages of %50 and %80 are adapted from their research.

2.4.9.1 Results

Manipulation check: Participants appeared to perceive the implicit theory manipulation as intended. The three items on the implicit theory scale ($M=3.3$, $SD=1.2$, $\alpha = .90$) were averaged, and higher scores indicated a stronger entity belief ($M_{\text{entity}} = 3.64$, $M_{\text{incremental}} = 2.86$, $F(1,198) = 22.54$, $p < .001$)

Dependent variable: A chi-square test of independence was executed to evaluate the relationship between implicit theory and product type. Similar to Study 3, we conducted a Chi-Square test.

The relationship between these variables was not significant ($X^2([1], N = 200) = [1.56]$, $p = .211$).

Even though the result is not significant. Results showed that within incremental theorists, 92.2% (94) of the participants chose the %80 upcycled product, and 7.8% (8) chose the %50 upcycled product. On the other hand, within entity theorists, 86.7% (85) of the participants chose the %80 upcycled product, and 13.3% (13) chose the %50 upcycled product.

2.4.9.2 Discussion

Study 7 aimed to investigate the impact of varying levels of upcycled material on the product preferences of individuals with different implicit theory mindsets. Specifically, the study utilized upcycled material levels of 50% and 80%, which were obtained from Scherer et al. (2018). Although Scherer et al. (2018) also included a level of 100%, it was not employed in the current study because there are not many products that are 100% upcycled. In the surveyed products, various items with upcycling levels were relatively close to 50% or 80%, such as jackets with recycled outer layers but conventional inner layers or backpacks with upcycled outer shells but conventional zippers and inner casings.

Results of study 7 showed that both entity and incremental theorists preferred products with higher upcycling percentages. The findings indicated that consumers generally preferred products with higher levels of sustainable materials over lower levels and that there were no significant differences in preferences between individuals with different implicit theory mindsets, providing support for external validity.

2.5 General Discussion

2.5.1 Summary of Findings

The series of studies conducted in this research aimed to understand the impact of implicit theories on consumer preferences for upcycled, recycled, and conventional products.

Study 1 provided initial evidence supporting the hypothesis that both entity and incremental theorists exhibited a preference for upcycled products over conventional products, providing

support for H1. Subsequent studies sought to explore the preferences of these theorists concerning upcycled and recycled products, as well as examine the role of perceived price, product improvement, and signaling in shaping these preferences.

Study 2 revealed a significant interaction effect between sustainable product type and implicit theories on purchase intention. Entity theorists showed a greater preference for recycled products than upcycled products, which called for further investigation into the relationship between product type and implicit theory, providing support for H2 and a marginally significant support for H3.

Studies 3 and 4 further supported the hypotheses that entity theorists preferred recycled products, while incremental theorists favored upcycled products, providing support for both H2 and H3.

In Study 5, the influence of improvement cues in product descriptions was examined, with incremental theorists showing a stronger preference for upcycled products with emphasized improvements, providing support for H4.

In Study 6, the influence of signaling cues in product descriptions was examined, with entity theorists showing a stronger preference for upcycled products with emphasized signaling, providing support for H5.

Finally, Study 7 investigated the effect of different levels of sustainable material content on product preferences, with both entity and incremental theorists preferring products with higher upcycling percentages. Both incremental and entity theorists would prefer a product with a higher percentage of sustainable material.

The price of sustainable products was explored as the research suggested that it might impact a consumer's product choice or liking. When the studies included the "same price" statement, the consumers still had a preference for a particular product type, suggesting that consumers have an intrinsic preference separated from price. When the studies did not include the "same price" statement, no main effect was found for a price on the product liking or purchase intention. This finding contrasts the expectation from entity theorists, as they would be expected to utilize a more expensive product to signal their qualities (Park and John 2012; Vigneron and Johnson 1999). Instead, they preferred recycled products, disconnected from the price.

The findings from this research contribute to understanding the role of implicit theories in shaping consumer preferences for sustainable products. By examining the impact of perceived price, product improvement, signaling, and sustainable material content, this research offers valuable insights into the factors influencing the choice of sustainable products among individuals with different mindset orientations.

A comparative table synthesizing the structure of the studies is provided below for reference.

Table 1 - Summary of the configuration of studies for Essay 1

Study	Hypothesis tested	Objective	Production Method	Product	Design	Dependent Variable(s)
Pretest 1	-	To understand people's ideas about recycled and upcycled products	Recycle & Upcycle	No specific product	Open-ended questions	-

Study 1	H1	To test whether upcycled products are preferred more than conventional products	Upcycle vs. Conventional	Backpack	Implicit theory (entity vs. incremental) x Product type (upcycled vs. conventional)	Product liking & Purchase intention
Study 2	H2 & H3	To test whether a particular group in implicit theory prefers a specific production method	Upcycle vs. Recycle	Backpack	Implicit theory (entity vs. incremental) x Product type (upcycled vs. recycled)	Product liking & Purchase intention
Pretest 2	-	Keeping the price constant to test production method selection within the implicit theory groups	Upcycle & Recycle & Conventional	Backpack	Implicit theory (entity vs. incremental) -Product type (upcycled & recycled & conventional)	Selection
Study 3	H2 & H3	Keeping the price constant to test the production method selection within implicit theory groups	Upcycle & Recycle	Backpack	Implicit theory (entity vs. incremental) -Product type (upcycled & recycled)	Selection
Study 4	H2 & H3	Keeping the price constant to test the production method selection within implicit theory groups	Upcycle & Recycle	Jacket	Implicit theory (entity vs. incremental) -Product type (upcycled & recycled)	Selection
Study 5	H4	To test the effect of improvement	Upcycle	Backpack	Implicit theory (entity vs.	Product liking &

		cues of production method on implicit theory groups			incremental) x Upcycled product (with improvement cues)	Purchase intention
Study 6	H5	To test the effect of signaling cues of production method on implicit theory groups	Upcycle	Backpack	Implicit theory (entity vs. incremental) x Upcycled product (with signaling cues)	Product liking & Purchase intention
Study 7	-	To test the production method selection with different upcycled material percentages within implicit theory groups	Upcycle	Jacket	Implicit theory (entity vs. incremental) -Product percentage (%50 & %80 upcycled)	Selection

2.5.2 Theoretical Contributions

The current research has made several pivotal contributions to the broader academic discourse, especially within the realms of sustainable products and consumer behavior. By intertwining concepts from the implicit self-theory literature (Chiu et al. 1997; Dweck 2016; Lickel et al. 2001) with sustainable products, the research broadens our understanding of how consumers' implicit theories can impact their purchasing intentions and product attitudes on upcycled and recycled products, adding a fresh dimension to existing knowledge.

The implicit theories explored several areas in consumer behavior such as brand user perceptions (Park and John 2017), luxury product attitudes (Gong et al. 2022), ad appeal effectiveness (Park

and John 2012) and attitudes towards technological products (Sharifi and Palmira 2017). However, this research bridges a gap by delving into behaviors surrounding upcycled and recycled products for implicit theories. This exploration is particularly timely and relevant given the increasing global interest in sustainable products.

A notable finding is that the incremental theorists evaluate upcycled products more favorably compared to entity theorists. On the other hand, entity theorists prefer recycled products more (vs. the incremental theorists). Additionally, the findings confirmed that incremental theorists are drawn to sustainable products that present improvement cues, consistent with their belief in growth and adaptability (Park and John 2010). Conversely, entity theorists, in line with their established tendencies (Mathur et al. 2016), were found to gravitate towards signaling cues, showcasing a preference for sustainable products that convey a certain unchanging identity or trait.

Another comprehensive observation from the research was the general preference among consumers for products incorporating more sustainable materials. Both entity and incremental theorists displayed a shared inclination towards products that boasted a higher content of sustainable materials, underscoring a widespread trend towards sustainable consumption.

In sum, this research not only reinforces established theoretical constructs but also provides novel insights and directions for literature. The findings inspire further exploration into sustainable consumer behavior, marking a significant advancement in this rapidly growing field of study.

2.5.3 Managerial Implications

The current research offers several managerial implications. The findings substantiate the hypothesis that consumers demonstrate a preference for upcycled or recycled products over

conventional products. Thus, introducing new product lines featuring upcycled or recycled items should not elicit concerns about consumer preference or purchasing intent.

The research also elucidates the impact of two distinct self-theories on consumer preferences for upcycled vs. recycled products. Firms with a predominant consumer base of entity theorists might focus more on recycled products. Conversely, those with a majority of incremental theorists could prioritize upcycled products. For targeted marketing campaigns, recognizing consumers as either entity or incremental theorists can guide product offerings—optimizing the match between consumer self-theory and product type.

Furthermore, marketing strategies for sustainable products can be refined to appeal to these implicit theories. Improving upon Park and John's (2010) findings, this research has shown that incremental theorists can be engaged with sustainable product narratives emphasizing personal growth, while entity theorists might be more receptive to messaging with signaling cues for sustainable products.

2.5.4 Limitations and Directions for Future Research

The findings of our preliminary studies have supported most of the hypotheses put forward, and there remain promising research paths to be explored whether all proposed hypotheses can be substantiated by their underlying mechanisms. There are also several limitations within this research which could be the focus of any future research.

A limitation of this research pertains to the narrow product range employed in the participant studies, which focused on upcycled and recycled backpacks and jackets. Constraints in time and resources precluded the exploration of a broader product spectrum. Future studies could benefit

from examining a more diverse array of products within the recycling and upcycling domain, thus expanding on our findings.

Notably, the studies within this research have indicated that there exists a discernible difference between participants exposed to a single product type (upcycled or recycled) versus those presented with both upcycled and recycled products. This difference suggests that consumers are more inclined towards one or the other when they are able to see and compare both sustainable products simultaneously. If there are two very similar products, with one being upcycled and the other recycled, presenting them together simultaneously to the consumer might prove to be a better strategy to increase product preference. This area of research could be further investigated, where varying numbers of comparable items, including sustainable options, are presented to consumers, and their product preferences are assessed.

Furthermore, integrating recycled or upcycled materials into products is an expanding business practice. While companies may not exclusively utilize sustainable materials for the entire product, many have begun incorporating these eco-friendly alternatives into their product lines. For example, a shoe can be fabricated using upcycled fabric, while its sole is produced through conventional means. The end product would have an improvement in its overall environmental impact. Nike, a notable example in this regard, has introduced new trainers (www.nike.com), which feature varying degrees of upcycled or recycled materials. A higher proportion of sustainable materials translates into less waste and a more environmentally-friendly product. Regardless of the proportion of sustainable materials used, the resulting product can be categorized as sustainable and supportive of environmental preservation. Gaining insight into how different quantities of upcycled or recycled materials used in a product impact consumer perception would

be advantageous. Additionally, this could potentially appeal to consumer segments that may not naturally lean towards sustainable products. Such a research could also reveal which sub-piece of the product would cause the most impact on the consumer's purchase interest.



3 Essay 2

3.1 Introduction

The notion of uniqueness carries significant importance across diverse categories, and this impact is also observable within the scope of products and services. To cater to consumers' growing preference for distinctiveness, even firms in mass production have expanded their product lines to incorporate items that can be customized according to each customer's preferences, effectively enhancing the overall consumer experience. Such product lines encompass a diverse range of items such as bags, cars, sneakers, and furniture (Fuchs and Schreier 2023; Moreau and Herd 2010).

Upcycled products hold a distinctive place in the realm of sustainable consumption. Unlike traditional recycling, where materials are broken down to create new items, upcycling involves creatively repurposing discarded materials or products to give them new life and value (Coppola et al. 2021; Yu and Lee 2019). This part of the research is motivated to emphasize the consumption and preferences of upcycled products for this very reason. Upcycled products often carry a unique charm and character resulting from the creative transformation of existing materials (Kamleitner et al. 2019).

The inherent distinctiveness of the repurposed materials, coupled with their unique combinations, yields products that are singular in nature, even when derived from identical source materials; and this process and the combination is the exact method how upcycled products gain their uniqueness. Gaining insights into consumers' perspectives concerning varying levels of uniqueness would be advantageous. While every upcycled product inherently possesses a distinctive aspect, varying degrees of uniqueness are still associated with them.

This Ph. D thesis contributes to the existing body of research concerning consumer preferences for upcycled products. It delves into the significance of varying levels of uniqueness – encompassing regular, few-of-a-kind, and one-of-a-kind upcycled items – and their impact on shaping consumers' inclinations towards upcycled product consumption. Additionally, the research investigates the relationship between perceived uniqueness and its effects on felt specialness, as well as its influence on product liking, intention to purchase, and WTP.

3.2 Conceptual Background

3.2.1 Uniqueness

The words “uniqueness” and “unique” are used to define things that are either only one of a kind or that are special or unusual in some way (Oxford Dictionary 2023). Unique things are notably dissimilar and different from others in the same category, and such a unique item should be infrequent.

3.2.1.1 Uniqueness in Products

Cardello et al. (2016) delved into the notion of product uniqueness in their research. The exploration was approached from a marketing standpoint where unique products are characterized as ones that exhibit notable differences from other products in their category due to their observable sensory, image, functional, emotional, or other traits that consumers appreciate (Cardello et al. 2016; Jaeger et al. 2017). This definition of uniqueness is underpinned by the understanding that the distinctiveness of a product is critical to the product's and brand's success (Anselmsson et al. 2008; Asshidin et al. 2016).

Certain conditions must be met for the differentiation of uniqueness to be impactful. The differentiation must manifest in a manner that is apparent to the consumers, thereby influencing their sensory perception and understanding of the product's functionality and emotional appeal (Cardello et al. 2016; Jaeger et al. 2017; Rahman et al. 2021). This entails that the product's unique characteristics should not only exist but also be conspicuous enough to be noticed by potential consumers.

Further, the differentiation must be significant to the consumers, contributing positively to the product's value. In other words, the unique characteristics should enhance the product's perceived value in consumers' eyes, making it more appealing and worthy of investment (Hyun and Park 2016; Jaeger et al. 2017).

Product uniqueness can be accomplished through various strategies. A standard base product might be customized to create a distinct variant (De Bellis et al. 2016), allowing consumers to select elements for inclusion in the final product, making it entirely unique. Another approach involves adding an engraving or mark to a product, making it not only unique but also personalized.

Although such a personalized product may not appeal to other consumers, the personalization process and the brand's customization offer can infuse it with a sense of uniqueness. Uniqueness also emerges from art pieces. Due to their singular nature and the inherent difficulty in reproducing them exactly (Hirschman 1983), art pieces represent one-of-a-kind products (Krause et al. 2023). Additionally, handmade products boast their own uniqueness, stemming from minor variations in their finish.

Upcycled products introduce a different category of uniqueness, distinguished from the types mentioned earlier, while exhibiting similar properties to some of the distinct types above. Each upcycled product is crafted using materials from pre-used products, and the pattern may vary depending on the design of the utilized material. A case in point would be backpacks created from the truck tarps of logistics companies. Each backpack, cut from a unique segment of a worn truck tarp, represents a different piece of the truck tarp (www.freitag.ch). Another example can be found in the company “ReWork” practices, where new clothing items are crafted from used apparel. Each article is a unique amalgamation of available materials retrieved from used clothing, resulting in a diverse product range (www.rework.ch).

In the context of this investigation, two distinct degrees of uniqueness can be ascribed to products: “one-of-a-kind” uniqueness and “few-of-a-kind” uniqueness. One-of-a-kind uniqueness characterizes a product that is singular in its existence - entirely unparalleled. There is no other instance of this product identical to it. Examples might include original art pieces or “personalized” items distinguished by engravings or bespoke alterations. In contrast, few-of-a-kind uniqueness represents a product's rarity, signifying multiple but not widely available instances of the same product in the market. The product's infrequency amplifies its perceived worth. Illustrative

instances of few-of-a-kind uniqueness might encompass ‘limited edition’ offerings, handcrafted articles with minor variations, or commodities manufactured through a unique yet replicable production process. The relative scarcity of these products offers a sense of exclusivity, thereby augmenting their perceived uniqueness.

It is essential to acknowledge the intertwined relationship between the constructs of uniqueness and scarcity; by their nature, unique items are characterized by their rarity, and that which is rare is inherently scarce. A substantial body of research in consumer behavior has delved into the implications of scarcity (Cialdini 1993; Zhu and Ratner 2015; Kristofferson et al. 2017). Studies have suggested that product scarcity could trigger elevated levels of arousal among consumers (Hamilton et al. 2019, Zhu and Ratner 2015), and it has been observed that consumers are inclined to infer a product's quality based on its price when its availability is limited. For instance, high-priced products were often considered superior quality (Hamilton et al. 2019, Suri et al. 2007). Furthermore, maintaining a level of scarcity has been proposed as a strategic approach for certain brands to communicate the high quality of their products to uninformed consumers (Stock and Balachander 2005).

Nonetheless, using scarcity as a marketing tool should be employed judiciously due to potential unintended repercussions. One such repercussion includes provoking aggression among consumers as the limited quantity of a scarce product might lead consumers to perceive other consumers as competitors (Kristofferson et al. 2017). At the time of this study, to the best of our knowledge, no existing research has been identified that applies the scarcity principle in marketing in conjunction with sustainable products.

While the notion of uniqueness for a product is a characteristic of the product itself, consumers may have divergent interpretations of the same product's level of uniqueness. This introduces the concept of perceived uniqueness, signifying the consumer's subjective understanding of a product's distinctiveness.

3.2.1.2 Perceived Uniqueness

The construct of a product's perceived uniqueness elucidates how a consumer distinguishes a given product from its counterparts within a similar category (Tian et al. 2001). This notion is centered around the product's interrelationship with other analogous offerings. Product uniqueness is rooted in the tangible, quantifiable differences in the product's attributes, while perceived uniqueness is derived from the consumer's individual perception and interpretation of these attributes.

Franke and Schreier (2008) suggest that this paradigm can be explained by invoking the tenets of commodity theory. According to this theory, the perceived scarcity of an item should bolster its desirability, making it more appealing to potential consumers (Cialdini 1993; Lynn 1991; Jung and Kellaris 2004). The ownership of such scarce commodities introduces a sense of value in the consumer, primarily because these items facilitate the creation of a distinct identity, different from the homogeneity of the masses (Snyder and Fromkin 1980). For example, Chen and Sun (2013) indicated that perceived quality and perceived uniqueness, which notably increased due to product scarcity, had a significant positive effect on perceived value. This, in turn, significantly increased the purchase intention.

It can be inferred that, as an act of resistance against conformity, consumers are inclined to purchase goods that embody novelty or originality. They also show a tendency for handcrafted items or vintage and antique goods, which are inherently limited in quantity (Franke and Schreier

2008; Kron 1983; Tian et al. 2001). In some cases, consumers even adopt a creative approach in decorating, arranging, and displaying a mix of goods so that their collection is perceived as unique (Belk et al. 1989). Such behavior indicates the complex interplay of social norms, individual preferences, and marketing strategies in shaping consumer behavior.

3.2.1.3 Need for Uniqueness

The exploration of perceived uniqueness is undertaken from a consumer-centric perspective, but it is important to note that this perception is not inherently a “trait” of the consumer. Rather, a certain subset of consumers displays a marked preference for acquiring unique products, a concept identified as the “need for uniqueness.” This encompasses a variety of motivations for seeking out unique products (Tian and McKenzie 2001, Tian et al. 2001). As quantified by the corresponding scale, the consumers’ need for uniqueness (CNFU) measures the intensity of a consumer's inclination toward procuring unique goods. It demarcates three distinct categories: "creative choice counterconformity (CCC)" whereby consumers opt for deviating but still socially acceptable choices, "unpopular choice counterconformity (UCC)" wherein consumers make choices deviating from the group, potentially incurring the risk of social disapproval; and "avoidance of similarity (AS)," a category in which consumers intentionally differ from the standard choice to establish their distinctiveness (Tian and McKenzie 2001, Tian et al. 2001). The CNFU scale offers a means to measure the degree to which a consumer values uniqueness within a product, independent of any specific product reference.

3.2.2 Felt Specialness

The concept of uniqueness is similar to the definition of specialness, and it may be used interchangeably (Tian et al. 2001) or in association with each other (Pocheptsova et al. 2010, Kamleitner et al. 2019, McFerran and Argo 2014). The concept of "Felt Specialness" was introduced by Kamleitner et al. (2019) to signify a feeling originating from the product or service that a consumer engages with. According to Kamleitner et al. (2019), the demand for upcycled products can be heightened when their previous identities are brought to the fore, which results from an amplified felt specialness of the product - conceptualized as "... the belief that they will experience enhanced specialness through the acquisition and use of a product ...". As of the drafting of this thesis, research surrounding felt specialness is lacking, and has the potential to contribute fresh insights into several facets of consumer research.

The subject of commodities and services evoking a sense of specialness has also been explored, albeit without utilizing the term "felt specialness." Rifkin and Berger (2016) scrutinized the impact of specialness and the frequency of product utilization. They propose that everyday items can assume greater specialness as their usage dwindles. Occasionally things can embark on a specialness spiral where the item's specialness escalates. It is reserved for more extraordinary occasions, as illustrated by "good china" remaining untouched or a fine bottle of wine kept unopened for years. They draw a correlation between the specialness of the item and the specialness derived from its use.

3.2.3 Upcycled products and Uniqueness

The practice of upcycling discarded, and previously utilized items inherently culminates in the creation of distinctive products. The uniqueness inherent in upcycled products has been the focus of numerous studies published in literature: Yu and Lee (2019) and Ali et al. (2013) state upcycling “... gives new life to a product by adding unique ideas & designs to discarded material ...” which is then later remarked to instill joy and excitement in the consumer’s mind. Kwan (2012) deems the value of upcycled products increased due to the designer’s creativity and choice of materials to create a unique product. Vadicherla et al. (2017) also state that upcycling requires “awareness, creativity, innovation, and hard work” to generate a unique product. Paras and Curteza (2018) discuss how the input material is already unique due to the different defects and peculiarities (Bofylatos 2022), which then is combined to generate the “unique design solution.” Park et al. (2020) examine how upcycling “upgrades” the product into a unique style, which also draws from the desire for vintage for the uniqueness it provides. Moreover, Bhatt et al. (2019) also state the uniqueness of upcycled products and the fashion-conscious consumers being drawn to such products for their uniqueness. Kamleitner et al. (2019) utilize this uniqueness of upcycled (or transformed) products to elicit a story of the product, which would then impact the consumer’s purchase intention.

In the research mentioned above, the distinctive design and style upcycled products have been discussed in multiple ways. Still, to the best of our knowledge, no research exists to measure the direct impact of the level of uniqueness itself on the consumer’s desire for the product. Due to the nature of the input materials available to the upcycling process, the end product could be a completely unique, one-of-a-kind product, or could be a part of a limited-series uniqueness, where

only a handful of products exist - but individual products not being completely unique. This concept is named ‘few-of-a-kind products’ within this research.

With that in mind, this research will explore the impact of the level of uniqueness of upcycled products on the consumer’s desire to obtain upcycled products, including varying mediating and moderating variables.

3.3 Theoretical Framework

In literature, unique products are often described as products that have a limited existence or are available in only a few instances (Fuchs and Schreier 2023; Irmak et al. 2010; Michel et al. 2009). To the best of our knowledge, only Krause et al. (2023) used the one-of-a-kind unique products in their research. They mentioned that the concept of uniqueness, specifically being one-of-a-kind, is particularly applicable in mass customization contexts where there is a high probability of customizing a genuinely unique and individualized product.

This research primarily focuses on one-of-a-kind upcycled products. Upcycled products inherently possess a certain level of uniqueness due to the process of transforming discarded materials into new and valuable items (Flowers et al. 2018; Sung 2015). One-of-a-kind upcycled products can be found across various brands. For example, Nok Boards (www.nokboards.com) upcycle unused snowboards into skateboards. And the brand stated, “A skateboard made from an unused snowboard. This cruiser made in France is a unique and numbered piece. Only one copy is available!” on its website.

Stating that a product is “unique” can change the consumer’s perception of the product. Krause et al. (2023) proposed that when consumers receive automated feedback indicating that a product is unique, it increases their perception of its value. The feedback that highlighted customized products as exclusive significantly boosted consumer value, as evidenced by higher conversion rates, more positive product attitudes, and increased WTP.

The first hypothesis of this research delves into the concept of product uniqueness in the realm of upcycled items and its direct influence on the consumer's interest in these products. For this research, product uniqueness will be categorized as “one-of-a-kind,” “few-of-a-kind,” or “regular.” The consumer's interest, or desire, for the upcycled product, will be gauged through measures such as purchase intention, product liking, and WTP. It is anticipated that there will be a notable increase in the consumer's purchase intention, product liking, and WTP for the upcycled product when it is characterized as a “one-of-a-kind” as opposed to a regular, non-unique upcycled item.

H1: *Consumers will have higher purchase intentions and product attitudes more for one-of-a-kind unique upcycled products (vs. regular upcycled products)*

The relationship between the upcycled product’s uniqueness can be extended to include certain perceptions of the consumer, such as the specialness a consumer feels (Kamleitner et al. 2019). Kamleitner et al. (2019) suggested that products with stories generate greater demand because they create a sense of "felt specialness" among customers. This specialness indicates that customers believe they will experience a heightened sense of uniqueness and personal significance by acquiring and using a product that carries a story. The researchers conducted tests to examine the impact of past identity salience on demand, analyzing the role of specialness as a mediator.

This research proposes that greater degrees of uniqueness will enhance the sense of felt specialness attributed to the product. As the product's perceived uniqueness increases, it intensifies consumers' sensations of exclusivity and personal importance, subsequently positively impacting their purchase intention, product liking, and WTP.

H2: *The relationship between the uniqueness level of an upcycled product and purchase intentions & product attitudes will be mediated by the felt specialness of the consumer*

The relationship between the uniqueness of an upcycled product and the consumer's purchase intention, product liking, and WTP offers marketers a strategic avenue to heighten product appeal. This notion extends beyond exceptionally unique items, encompassing products that are less unique but still rare, like few-of-a-kind items, exemplified as one out of four hundred identical upcycled products. Krause et al. (2023) delved into this, where non-upcycled products can be customized, after which the customization system would provide feedback on how unique your customization is, which could range from completely unique to very common, or a point somewhere in between, depending on the selected options for the customization.

Literature highlights the distinctiveness of upcycled products, even those that are not strictly one-of-a-kind (Kamleitner et al. 2019; Slettenhaar 2021). Previous research explored increased or decreased levels of perceived uniqueness of products – Ames and Iyengar (2005) argued that objects that deviate from the norm are naturally unclear and can be interpreted in contrasting ways depending on whether they are seen as unique or typical. These variations in attention have the potential to influence how uniqueness is perceived: individuals who focus on an object's distinctive characteristics may perceive it as more extraordinary compared to those who prioritize its common

attributes. This evaluation of extraordinariness would interact with the observer's motivation for uniqueness, thereby influencing their overall assessments.

Building on Ames and Iyengar's (2005) approach, this research aims to steer consumers' uniqueness perceptions of upcycled products. When a product is presented to a consumer, a question would suggest thinking of either unique or typical qualities of the presented product to highlight the desired quality. Such a question would allow the consumer to focus more on the product's uniqueness or typicality and bring out the desired qualities. This study contrasts one-of-a-kind and few-of-a-kind upcycled products to discern shifts in perceived uniqueness based on this framework. Such a framework for “thinking about unique/typical qualities” of the upcycled product will be analyzed in two different frames: uniqueness-framing and typicality-framing.

Under uniqueness-framing, while one-of-a-kind products remain inherently unique, few-of-a-kind items may experience an elevation in perceived uniqueness. The hypothesis is that within this frame, perceived uniqueness differences between one-of-a-kind and few-of-a-kind products diminish, narrowing the gap in purchase intent, appreciation, and WTP. Consequently, few-of-a-kind products might be perceived as equally unique as one-of-a-kind items.

H3a: *Under the uniqueness frame (vs. typicality frame) few-of-a-kind upcycled products will be perceived as more unique leading to a higher evaluation of the products*

Upcycled products classified as one-of-a-kind are anticipated to exhibit distinct patterns compared to few-of-a-kind upcycled products. Given their inherent uniqueness, it is postulated that neither the uniqueness-frame nor the typicality-frame will significantly influence consumers' perceptions

of their uniqueness. Consequently, the perceived uniqueness of one-of-a-kind products is hypothesized to remain invariant irrespective of the framing utilized.

H3b: *One-of-a-kind upcycled products will have no difference between the uniqueness frame and the typicality frame*

Until this juncture, the current research has focused on the uniqueness aspect of upcycled products from a product-centric perspective. This primarily accounts for the inherent uniqueness of the product itself. However, consumers also possess particular desires that relate to their propensity for acquiring unique items, which can elicit specific emotional responses when satisfied - a concept referred to as the “need for uniqueness” (Hyun and Park 2016).

The construct of “CNFU” pertains to an individual's pursuit of distinctiveness, a longing to differentiate oneself from the rest. This differentiation is often achieved through acquiring, utilizing, and disposing of consumer goods. The underlying goal is to bolster one's personal and social identity by projecting a sense of individuality that differentiates oneself from the rest (Tian et al. 2001).

The “need for uniqueness” as a consumer-centric characteristic is anticipated to influence the varying levels of uniqueness in upcycled products. Specifically, a one-of-a-kind product is expected to cater more to CNFU, in contrast to a few-of-a-kind unique upcycled product. This will likely impact a consumer's purchase intention, product liking, and WTP when the product is deemed more unique. The CNFU is not anticipated to directly affect purchase intention, product liking, or WTP. Instead, it is expected to contribute in tandem with the upcycled product's level of uniqueness. Consequently, the need for uniqueness is considered a moderating variable for this

relationship. When consumers have a high need for uniqueness, they will have a more pronounced difference between one-of-a-kind vs. few-of-a-kind upcycled products concerning purchase intention, product liking, and WTP. This difference will be less pronounced for consumers with a lower need for uniqueness.

H4: *Consumers with a high need for uniqueness will show a more pronounced difference in purchase intention, product liking, and willingness to pay between one-of-a-kind and few-of-a-kind upcycled products compared to those with a low need for uniqueness.*

Within the scope of this research, a subset of dimensions within the “CNFU” construct has been employed, specifically the CCC and AS dimensions, with the UCC dimension excluded. The omission of the UCC dimension is due to the inherent social disapproval risk associated with it for consumers (Tian et al. 2001), whereas prevailing consumer inclinations gravitate towards ethical and sustainable behavior (Adiguzel and Donato 2021; Peloza et al. 2013). Given the principal environmental benefits induced by upcycling – notably its beneficial impact on resource depletion by removing the necessity for virgin raw materials in production processes – instances of social disapproval through the acquisition of upcycled products are not anticipated. Consequently, this research refrains from incorporating the UCC dimension, as its characterization diverges from the purchasing context of upcycled products.

The studies in the next section will explain how these hypotheses were initially tested.

3.4 Studies

3.4.1 Study 1

Design: This study had an Upcycled Product's Uniqueness level (one-of-a-kind vs. few-of-a-kind vs. control) between-subjects design.

Procedure: 150 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into three groups with product descriptions: a one-of-a-kind upcycled product, a few-of-a-kind upcycled product, or a regular upcycled product. According to their group assignment, they were shown one of the three texts for the uniqueness manipulation. Within each experimental condition, a backpack was presented, featuring varying degrees of uniqueness-related information about the backpack's upcycled nature.

In each condition, the definition of upcycling was given. In the "one-of-a-kind" condition, explicit information indicated that the presented backpack is the sole existing product with this design worldwide. Conversely, in the "few-of-a-kind" condition, participants were informed that only 60 identical backpacks had been produced globally. In the control condition, participants were solely exposed to the backpack itself, accompanied by a definition of the upcycled product without any statement about the product's uniqueness or commonality. The textual descriptions concerning the level of uniqueness were adapted from Krause et al.'s (2023) research (see Appendix).

The product liking ("How much did you like the new pack?" 1 = "not at all," and 7 = "very much"), participants' purchase intention ("How much will you consider buying the new backpack?" 1 = "not at all," and 7 = "very much"), WTP ("How much are you willing to pay for this new

backpack?"; a slider with scale points minimum of 0\$ to a maximum of 500\$), the durability of the backpack ("The new backpack is durable." 1= "strongly disagree," and 7 = "strongly agree") and the quality of the backpack ("The new backpack has good quality." 1= "strongly disagree," and 7 = "strongly agree") were assessed.

Perceived product uniqueness was measured with three items ("I perceive this new backpack as highly unique," "This new backpack is one of a kind," and "The new backpack design is really special" 1= "strongly disagree," and 7 = "strongly agree") (Franke and Schreier 2008) and felt specialness with one item ("how special would you feel with this new backpack?" 1= "not at all," and 7 = "very much") (Kamleitner et al. 2019).

3.4.1.1 Results

Dependent variable: Purchase intention (M=3.45, SD=1.8), liking (M=4.01, SD=1.9), WTP (M=41.08, SD=32.73), quality (M=4.61, SD=1.2), durability (M=4.99, SD=1.2) are used as the dependent variables.

Perceived uniqueness scale (M=4.97, SD= 1.4, $\alpha = .80$) and felt specialness (M=4.11, SD= 1.8) are used as mediators.

Mediation: PROCESS is employed, developed by Andrew Hayes (Hayes 2012), in the analysis to perform the mediation. This tool extends to statistical software packages such as the Statistical Package for the Social Sciences (SPSS), enabling the computation of regression analyses incorporating multiple combinations of mediators, moderators, and covariates.

In our study, the independent variable is multicategorical, encompassing three levels: (1) the upcycled backpack without any uniqueness information, (2) the upcycled backpack identified as

one among 60 items, and (3) the upcycled backpack presented as the only one in existence. To analyze the mediation effect, PROCESS's Model 4 multicategorical mediation analysis was employed to analyze the mediation effect. To analyze the serial mediation effect, PROCESS's Model 6 multicategorical mediation analysis was utilized to analyze the serial mediation effect.

3.4.1.1.1 Felt Specialness as Mediator

Purchase intention: The a-path of the mediation (Uniqueness level $\rightarrow$ Felt specialness) is significant for both the one-of-a-kind (3) vs. control (1) and few-of-a-kind uniqueness levels (2) vs. control (1) ($\beta_{\text{one}} = .8400$, $SE_{\text{one}} = 0.3623$, %95 CI [.1240, 1.5560], $t_{\text{one}} = 2.32$, $p_{\text{one}} = .02$; $\beta_{\text{few}} = .8800$, $SE_{\text{few}} = 0.3623$, %95 CI [.1640, 1.5960], $t_{\text{few}} = 2.43$, $p_{\text{few}} = .02$). The b-path of the mediation (Felt specialness $\rightarrow$ Purchase intention) is significant ($\beta = .6047$, $SE = 0.067$, %95 CI [.4714, .7379], $t = 8.9683$, $p = .00$). The c-path (direct effect) of the mediation (Uniqueness level $\rightarrow$ Purchase intention) is not significant for both the one-of-a-kind backpack (3) vs. control (1) and few-of-a-kind backpack (2) vs. control (1) ($\beta_{\text{one}} = -.1679$, $SE_{\text{one}} = 0.3015$, %95 CI [-.7638, .4280], $t_{\text{one}} = -.56$, $p_{\text{one}} = .58$; $\beta_{\text{few}} = -.5921$, $SE_{\text{few}} = 0.3020$, %95 CI [-1.1891, .0048], $t_{\text{few}} = -1.96$, $p_{\text{few}} = .052$). The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 0.51 (%95 CI [.0754, .9856]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on purchase intention. Further, the regressive model indicated an overall significant (mediation) indirect effect of 0.53 (%95 CI [.1064, 1.0044]), which suggests that the few-of-a-kind uniqueness level (2) vs. control (1) shows a significant indirect effect on purchase intention.

Liking: The a-path of the mediation (Uniqueness level $\rightarrow$ Felt specialness) is significant for both the one-of-a-kind uniqueness level (3) vs. control (1) and few-of-a-kind uniqueness level (2) vs.

control (1) ($\beta_{\text{one}} = .8400$, $SE_{\text{one}} = 0.3623$, %95 CI [.1240, 1.5560], $t_{\text{one}} = 2.32$, $p_{\text{one}} = .02$; $\beta_{\text{few}} = .8800$, $SE_{\text{few}} = 0.3623$, %95 CI [.1640, 1.5960], $t_{\text{few}} = 2.43$, $p_{\text{few}} = .02$). The b-path of the mediation (Felt specialness $\rightarrow$ Liking) is significant ($\beta = .6559$, $SE = 0.0671$, %95 CI [.5233, .7886], $t = 9.7731$, $p = .00$). The c-path (direct effect) of the mediation (Uniqueness level $\rightarrow$ Liking) is not significant for the one-of-a-kind backpack (3) vs. control (1) and significant for few-of-a-kind backpack (2) vs. control (1) ($\beta_{\text{one}} = -.1310$, $SE_{\text{one}} = 0.3002$, %95 CI [-.7242, .4622], $t_{\text{one}} = -.44$, $p_{\text{one}} = .663$; $\beta_{\text{few}} = -.6572$, $SE_{\text{few}} = 0.3007$, %95 CI [-1.2514, -.0630], $t_{\text{few}} = -2.19$, $p_{\text{few}} = .030$). The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 0.55 (%95 CI [.0954, 1.0504]), which suggests that the one-of-a-kind uniqueness level (3) vs control (1) shows a significant indirect effect on product liking. Further, the regressive model indicated an overall significant (mediation) indirect effect of 0.58 (%95 CI [.1133, 1.0878]), which suggests that the few-of-a-kind uniqueness level (2) vs control (1) shows a significant indirect effect on product liking.

WTP: The a-path of the mediation (Uniqueness level $\rightarrow$ Felt specialness) is significant for both the one-of-a-kind uniqueness level (3) vs control (1) and few-of-a-kind uniqueness level (2) vs control (1) ($\beta_{\text{one}} = .8400$, $SE_{\text{one}} = 0.3623$, %95 CI [.1240, 1.5560], $t_{\text{one}} = 2.32$, $p_{\text{one}} = .02$; $\beta_{\text{few}} = .8800$, $SE_{\text{few}} = 0.3623$, %95 CI [.1640, 1.5960], $t_{\text{few}} = 2.43$, $p_{\text{few}} = .02$). The b-path of the mediation (Felt specialness $\rightarrow$ WTP) is significant ($\beta = 9.4372$, $SE = 1.279$, %95 CI [6.9094, 11.9651], $t = 7.3783$, $p = .00$). The c-path (direct effect) of the mediation (Uniqueness level $\rightarrow$ WTP) is not significant for both the one-of-a-kind backpack (3) vs control (1) and few-of-a-kind backpack (2) vs control (1) ($\beta_{\text{one}} = -2.9073$, $SE_{\text{one}} = 5.7202$, %95 CI [-14.2124, 8.3978], $t_{\text{one}} = -.51$, $p_{\text{one}} = .61$; $\beta_{\text{few}} = -.8447$, $SE_{\text{few}} = 5.7300$, %95 CI [-12.1693, 10.4798], $t_{\text{few}} = -.15$, $p_{\text{few}} = .88$). The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 7.92 (%95 CI [1.0608,

15.3944]), which suggests that the one-of-a-kind uniqueness level (3) vs control (1) shows a significant indirect effect on WTP. Further, the regressive model indicated an overall significant (mediation) indirect effect of 8.30 (%95 CI [1.4284, 15.8281]), which suggests that the few-of-a-kind uniqueness (2) vs. control (1) level shows a significant indirect effect on WTP.

Quality: The a-path of the mediation (Uniqueness level -> Felt specialness) is significant for both the one-of-a-kind uniqueness level (3) vs control (1) and few-of-a-kind uniqueness level (2) vs control (1) ($\beta_{one} = .8400$, $SE_{one} = 0.3623$, %95 CI [.1240, 1.5560], $t_{one} = 2.32$, $p_{one} = .02$; $\beta_{few} = .8800$, $SE_{few} = 0.3623$, %95 CI [.1640, 1.5960], $t_{few} = 2.43$, $p_{few} = .02$). The b-path of the mediation (Felt specialness -> Quality) is significant ($\beta = .3270$, $SE = .0468$, %95 CI [.2345, .4196], $t = 6.9831$, $p = .00$). The c-path (direct effect) of the mediation (Uniqueness level -> Quality) is not significant for both the one-of-a-kind backpack (3) vs control (1) and few-of-a-kind backpack (2) vs control (1) ($\beta_{one} = -.2547$, $SE_{one} = .2094$, %95 CI [-.6686, .1592], $t_{one} = -1.22$, $p_{one} = .23$; $\beta_{few} = -.0478$, $SE_{few} = .2098$, %95 CI [-.4624, .3668], $t_{few} = -.27$, $p_{few} = .82$). The analysis of the regressive model indicated an overall significant (mediation) indirect effect of .27 (%95 CI [.0473, .5418]), which suggests that the one-of-a-kind uniqueness level (3) vs control (1) shows a significant indirect effect on quality perception. Further, the regressive model indicated an overall significant (mediation) indirect effect of .29 (%95 CI [.0610, .5574]), which suggests that the few-of-a-kind uniqueness level (2) vs. control (1) shows a significant indirect effect on quality perception.

Durability: The a-path of the mediation (Uniqueness level -> Felt specialness) is significant for both the one-of-a-kind uniqueness level (3) vs control (1) and few-of-a-kind uniqueness level (2) vs control (1) ($\beta_{one} = .8400$, $SE_{one} = 0.3623$, %95 CI [.1240, 1.5560], $t_{one} = 2.32$, $p_{one} = .02$; $\beta_{few} = .8800$, $SE_{few} = 0.3623$, %95 CI [.1640, 1.5960], $t_{few} = 2.43$, $p_{few} = .02$). The b-path of the mediation

(Felt specialness $\rightarrow$ Durability) is significant ($\beta = .2132$, $SE = .0515$, %95 CI [.1114, .3149], $t = 4.14$, $p = .00$). The c-path (direct effect) of the mediation (Uniqueness level $\rightarrow$ Durability) is not significant for both the one-of-a-kind backpack (3) vs control (1) and few-of-a-kind backpack (2) vs control (1) ($\beta_{one} = -.3990$, $SE_{one} = .2302$, %95 CI [-.8541, .0560], $t_{one} = -1.73$, $p_{one} = .09$; $\beta_{few} = -.1076$, $SE_{few} = .2306$, %95 CI [-.5634, .3482], $t_{few} = -.466$, $p_{few} = .64$). The analysis of the regressive model indicated an overall significant (mediation) indirect effect of .18 (%95 CI [.0231, .3819]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on durability perception. Further, the regressive model indicated an overall significant (mediation) indirect effect of .19 (%95 CI [.0319, .3925]), which suggests that the few-of-a-kind uniqueness level (2) vs. control (1) shows a significant indirect effect on durability perception.

3.4.1.1.2 Perceived Uniqueness and Felt Specialness in Serial Mediation

Purchase intention: The results reveal that the uniqueness level of the upcycled product has an indirect effect on purchase intention in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant (serial mediation) indirect effect of 0.32 (%95 CI [.0959, .6020]), which suggests that the one-of-a-kind uniqueness level (3) shows a significant indirect effect on purchase intention vs control (1). The few-of-a-kind uniqueness level (2) vs. control (1) does not have a significant indirect effect on purchase intention (%95 CI [-.1040, .3233]).

Liking: The results reveal that the uniqueness level of the upcycled product has an indirect effect on liking in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant

(serial mediation) indirect effect of 0.34 (%95 CI [.1029, .6257]), which suggests that the one-of-a-kind uniqueness level (3) shows a significant indirect effect on liking vs control (1). The few-of-a-kind uniqueness level (2) vs. control (1) does not have a significant indirect effect on liking (%95 CI [-.1139, .3341]).

Willingness to pay (WTP): The results reveal that the uniqueness level of the upcycled product has an indirect effect on WTP in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant (serial mediation) indirect effect of 5.72 (%95 CI [1.6724, 10.6601]), which suggests that the one-of-a-kind uniqueness level (3) shows a significant indirect effect on WTP vs control (1). The few-of-a-kind uniqueness level (2) vs. control (1) does not have a significant indirect effect on WTP (%95 CI [-1.8107, 5.8715]).

Quality: The results reveal that the uniqueness level of the upcycled product has an indirect effect on quality perception in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant (serial mediation) indirect effect of 0.15 (%95 CI [.0395, .2921]), which suggests that the one-of-a-kind uniqueness level (3) shows a significant indirect effect on quality perception vs control (1). The few-of-a-kind uniqueness level (2) vs control (1) does not have a significant indirect effect on quality perception (%95 CI [-.0486, .1558]).

Durability: The results reveal that the uniqueness level of the upcycled product has an indirect effect on durability perception in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant (serial mediation) indirect effect of 0.09 (%95 CI [.0130, .2077]), which suggests that

the one-of-a-kind uniqueness level (3) shows a significant indirect effect on durability perception vs control (1). The few-of-a-kind uniqueness level (2) vs control (1) does not have a significant indirect effect on durability perception (%95 CI [-.0328, .1086]).

3.4.1.2 Discussion

The present research investigated the impact of uniqueness level on purchase intention, product liking, and consumers' WTP, alongside consumers' perceptions of quality and durability. Felt specialness was utilized as the sole mediating variable for the first analysis, and perceived uniqueness and felt specialness were used in serial as multiple mediating variables for the second analysis.

The direct relationship between the type of uniqueness and purchase intention, consumers' WTP, and perceived durability and quality were found insignificant across all uniqueness level groups. Only a singular significant direct effect existed between the uniqueness type and product liking for a few-of-a-kind versus the control group. This lack of a direct effect suggests that mere categorization based on uniqueness level may not be enough to bolster purchase intention or WTP, nor does it influence perceptions of quality or durability. To observe a direct effect, making the value of this uniqueness level more salient could be necessary (Lynn 1991). The significance of product liking for the few-of-a-kind unique upcycled products might be due to the influence of a variable not considered in this study, or it could be a byproduct of the study itself. This will not be analyzed further in this research.

Following direct relationships, mediated effects were analyzed, with felt specialness as the initial mediator for the previously mentioned relationships. Within this mediated relationship, this study

indicated that felt specialness as the mediator was significant for purchase intention, product liking, WTP, and perceived durability and quality variables, for both one-of-a-kind and few-of-a-kind unique products from the control group. Describing a product as completely unique or as few-of-a-kind unique influences the consumer's felt specialness, impacting purchase intention, product liking, and consumer WTP. It also affects perceived quality and durability, suggesting that advertising an upcycled product as either a few-of-a-kind or one-of-a-kind enhances consumer perception of the product. Any information about a product's uniqueness should be made salient to influence the consumer's feeling of specialness.



Figure 1 - Conceptual map for the mediation model in Study 1

Upon examining felt specialness as a standalone mediator for the relationship, this study utilized both perceived uniqueness and felt specialness within a serial mediation model. According to this model, alterations to the uniqueness level are postulated to influence perceived uniqueness, subsequently affecting the consumer's sense of felt specialness, ultimately impacting factors such as purchase intention, product liking, or WTP.

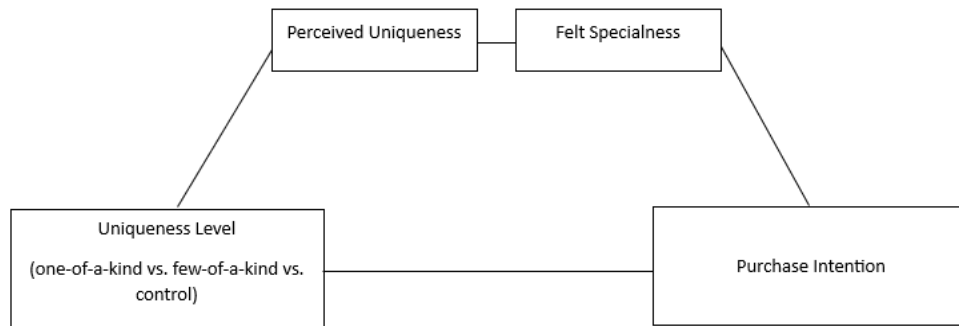


Figure 2 - Conceptual map for the serial mediation model in Study 1

The analysis of the serial mediation model indicated that the uniqueness level significantly affects purchase intention when perceived uniqueness and felt specialness are serial mediators. Specifically, when an upcycled product is presented as one-of-a-kind (vs. few-of-a-kind or regular upcycled), it amplifies the consumer's perceived uniqueness, heightening the consumer's sense of feeling special. This sequentially results in an increased purchase intention for the upcycled product. The serially mediated relationship is also consistent for product liking and WTP, as well as the consumers' perceptions of quality and durability.

However, it is crucial to note that this serial mediation does not apply to few-of-a-kind unique upcycled products. This is because few-of-a-kind upcycled products do not exhibit a statistically significant difference in perceived uniqueness compared to regular upcycled products. This finding may imply that a product description highlighting a few-of-a-kind uniqueness level does not change the perceived uniqueness of regular upcycled products. Alternatively, further information

might need to be emphasized for consumers to perceive few-of-a-kind products as more unique, such as providing a point of reference regarding the commonness of a control group product.

With the results and analyses from Study 1, Study 2 is planned accordingly. Exploring the manipulability of perceived uniqueness levels within the domain of one-of-a-kind and few-of-a-kind upcycled products carries significant implications. Even though a few-of-a-kind product inherently embodies a noteworthy level of distinctiveness, its uniqueness holds distinct variations compared to a sole, entirely unique item. By presenting a specific vantage point, the uniqueness perception of a few-of-a-kind product can potentially be amplified, intensifying the perceived distinctiveness. Similarly, an alternative perspective might contribute to the alteration of the uniqueness magnitude attached to a one-of-a-kind product. Study 2 introduces a manipulation to change perceived uniqueness. This manipulation aims to determine whether changes in perceived uniqueness also lead to variations in the outcomes of the mediation analysis.

3.4.2 Study 2

Design: This study had an Upcycled Product's Uniqueness level (one-of-a-kind vs. few-of-a-kind) and frame type (unique vs. typical) between-subjects design.

Procedure: 200 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into two groups with product descriptions: a one-of-a-kind upcycled product or a few-of-a-kind upcycled product. According to their group assignment, they were shown one of the two texts for the uniqueness manipulation. Within each experimental condition, a backpack was presented, featuring varying degrees of uniqueness-related information

about the backpack's upcycled nature. The same texts for the one-of-a-kind and few-of-a-kind backpack are used as in Study 1 (See Appendix).

Then, participants were randomly assigned into two groups: the uniqueness frame or the typicality frame. In the uniqueness frame, they were asked to think about the unique features of the backpack they were shown before (“Please describe the unique characteristics exhibited by this backpack. Kindly provide a sentence or two outlining its unique features”). In the typicality frame, they were asked to think about the typical features of the backpack they were shown before (“Please describe the typical characteristics exhibited by this backpack. Kindly provide a sentence or two outlining its typical features”). The manipulation is adapted from Ames and Iyengar (2005).

The remaining questions asked in the study followed a similar structure as described in Study 1.

3.4.2.1 Results

200 participants were recruited in Prolific, but because of a technical glitch, 201 participants completed the survey.

Dependent variable: Purchase intention ($M=3.40$, $SD=1.9$), liking ($M=4.08$, $SD=1.8$), WTP ($M=42.22$, $SD=35.28$), quality ($M=4.89$, $SD=1.2$), durability ($M=5.17$, $SD=1.2$) are used as the dependent variable.

3.4.2.1.1 Felt Specialness as Mediator

Felt specialness: 2x2 ANOVA is conducted to estimate the felt specialness ($M=3.92$, $SD= 1.7$) differences across the uniqueness level of the products and the two types of framing.

The average scores of the felt specialness as the dependent variable and uniqueness level of the product (one-of-a-kind and few-of-a-kind) as the independent variable, along with framing type (uniqueness and typicality) showed that participants in the few-of-a-kind condition with uniqueness framing have significantly higher felt specialness than participants in the few-of-a-kind condition with typicality framing ($M_{\text{few-typicality}} = 3.46$, $M_{\text{few-uniqueness}} = 4.25$, $F(1,197) = 5.42$, $p = .021$). Framing type did not have a significant effect on felt specialness for the one-of-a-kind condition ($M_{\text{one-typicality}} = 4.13$, $M_{\text{one-uniqueness}} = 3.90$, $F(1,197) = 0.43$, $p = .515$).

In the subsequent mediation analysis, the independent variable consisted of the one-of-a-kind and few-of-a-kind conditions within the typicality frame. Similar to Study 1, felt specialness was utilized as the mediator in this analysis.

3.4.2.1.2 Typicality frame

Purchase intention: The a-path of the mediation (Uniqueness level $\rightarrow$ Felt Specialness) is significant for the one-of-a-kind vs. few-of-a-kind ($\beta = .6788$, $SE = 0.3378$, %95 CI [.0084, 1.3492], $t = 2.01$, $p = .047$). The b-path of the mediation (Felt Specialness $\rightarrow$ Purchase intention) is significant ($\beta = .7750$, $SE = 0.0943$, %95 CI [.5879, .9621], $t = 8.2218$, $p = .00$). The c-path or the direct effect (Uniqueness level $\rightarrow$ Purchase intention) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = -.3402$, $SE = 0.3217$, %95 CI [-.9787, .2982], $t = -1.057$, $p = .293$). The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 0.53 (%95 CI [.0016, 1.1343]), which suggests that the one-of-a-kind vs. few-of-a-kind uniqueness levels show a significant indirect effect on purchase intention.

Liking: The a-path of the mediation (Uniqueness level $\rightarrow$ Felt Specialness) is significant for the one-of-a-kind vs. few-of-a-kind ($\beta = .6788$, $SE = 0.3378$, %95 CI [.0084, 1.3492], $t = 2.01$, $p = .047$).

The b-path of the mediation (Felt Specialness -> Liking) is significant ($\beta = .6931$, $SE = 0.0902$, %95 CI [.5141, .8721], $t = 7.6860$, $p = .00$). The c-path or the direct effect (Uniqueness level -> Liking) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = -.3129$, $SE = 0.3077$, %95 CI [-.9237, .2979], $t = -1.016$, $p = .312$). The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 0.47 (%95 CI [.0009, .9976]), which suggests that the one-of-a-kind vs. few-of-a-kind uniqueness levels show a significant indirect effect on liking.

WTP: The a-path of the mediation (Uniqueness level -> Felt Specialness) is significant for the one-of-a-kind vs. few-of-a-kind ($\beta = .6788$, $SE = 0.3378$, %95 CI [.0084, 1.3492], $t = 2.01$, $p = .047$). The b-path of the mediation (Felt Specialness -> WTP) is significant ($\beta = 6.8536$, $SE = 1.9663$, %95 CI [2.9510, 10.7562], $t = 3.485$, $p = .00$). The c-path or the direct effect (Uniqueness level -> WTP) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = -.8764$, $SE = 6.7104$, %95 CI [-14.1946, 12.4419], $t = -.1306$, $p = .896$). The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 4.65 (%95 CI [.0000, 10.2890]), which suggests that the one-of-a-kind vs. few-of-a-kind uniqueness levels show a significant indirect effect on WTP.

Quality: The a-path of the mediation (Uniqueness level -> Felt Specialness) is significant for the one-of-a-kind vs. few-of-a-kind ($\beta = .6788$, $SE = 0.3378$, %95 CI [.0084, 1.3492], $t = 2.01$, $p = .047$). The b-path of the mediation (Felt Specialness -> Quality) is significant ($\beta = .2301$, $SE = .0647$, %95 CI [.1017, .3586], $t = 3.556$, $p = .00$). The c-path or the direct effect (Uniqueness level -> Quality) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = -.2532$, $SE = .2209$, %95 CI [-.6915, .1852], $t = -1.1464$, $p = .254$). The analysis of the regressive model

indicated an overall significant (mediation) indirect effect of .16 (%95 CI [.0075, .3692]), which suggests that the one-of-a-kind vs. few-of-a-kind uniqueness levels show a significant indirect effect on quality perception.

Durability: The a-path of the mediation (Uniqueness level -> Felt Specialness) is significant for the one-of-a-kind vs. few-of-a-kind ($\beta = .6788$, $SE = 0.3378$, %95 CI [.0084, 1.3492], $t = 2.01$, $p = .047$). The b-path of the mediation (Felt Specialness -> Durability) is not significant ($\beta = .1329$, $SE = .0684$, %95 CI [-.0029, .2686], $t = 1.943$, $p = .055$). The c-path or the direct effect (Uniqueness level -> Durability) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = -.0962$, $SE = .2334$, %95 CI [-.5565, .3670], $t = -.4123$, $p = .681$). The analysis of the regressive model indicated that there is not an overall significant (mediation) indirect effect (%95 CI [-.0120, .2452]) on durability perception.

In the subsequent mediation analysis, the independent variable consisted of the one-of-a-kind and few-of-a-kind conditions within the uniqueness frame.

3.4.2.1.3 Uniqueness frame

Purchase intention: The a-path of the mediation (Uniqueness level -> Felt Specialness) is not significant for the one-of-a-kind vs. few-of-a-kind ($\beta = -.3462$, $SE = 0.3557$, %95 CI [-1.0521, .3598], $t = -.9731$, $p = .333$). The b-path of the mediation (Felt Specialness -> Purchase intention) is significant ($\beta = .6368$, $SE = 0.0926$, %95 CI [.4530, .8205], $t = 6.8774$, $p = .00$). The c-path or the direct effect (Uniqueness level -> Purchase intention) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = .2813$, $SE = 0.3276$, %95 CI [-.3689, .9316], $t = .858$, $p = .392$). The analysis of the regressive model indicated that there is not an overall significant (mediation) indirect effect (%95 CI [-.6816, .2111]) on purchase intention.

Liking: The a-path of the mediation (Uniqueness level $\rightarrow$ Felt Specialness) is not significant for the one-of-a-kind vs. few-of-a-kind ($\beta = -.3462$, $SE = 0.3557$, %95 CI [-1.0521, .3598], $t = -.9731$, $p = .333$). The b-path of the mediation (Felt Specialness $\rightarrow$ Liking) is significant ($\beta = .6531$, $SE = 0.0804$, %95 CI [.4936, .8126], $t = 8.127$, $p = .00$). The c-path or the direct effect (Uniqueness level $\rightarrow$ Liking) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = .2902$, $SE = 0.2843$, %95 CI [-.2741, .8545], $t = 1.020$, $p = .31$). The analysis of the regressive model indicated that there is not an overall significant (mediation) indirect effect (%95 CI [-.6907, .2477]) on Liking.

WTP: The a-path of the mediation (Uniqueness level $\rightarrow$ Felt Specialness) is not significant for the one-of-a-kind vs. few-of-a-kind ($\beta = -.3462$, $SE = 0.3557$, %95 CI [-1.0521, .3598], $t = -.9731$, $p = .333$). The b-path of the mediation (Felt Specialness $\rightarrow$ WTP) is significant ($\beta = 11.4800$, $SE = 1.7369$, %95 CI [8.0328, 14.9272], $t = 6.609$, $p = .00$). The c-path or the direct effect (Uniqueness level $\rightarrow$ WTP) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = 2.3857$, $SE = 6.1458$, %95 CI [-9.8120, 14.5834], $t = .3882$, $p = .69$). The analysis of the regressive model indicated that there is not an overall significant (mediation) indirect effect (%95 CI [-13.2002, 3.9241]) on WTP.

Quality: The a-path of the mediation (Uniqueness level $\rightarrow$ Felt Specialness) is not significant for the one-of-a-kind vs. few-of-a-kind ($\beta = -.3462$, $SE = 0.3557$, %95 CI [-1.0521, .3598], $t = -.9731$, $p = .333$). The b-path of the mediation (Felt Specialness $\rightarrow$ Quality) is significant ($\beta = .4555$, $SE = .0664$, %95 CI [.3236, .5873], $t = 6.855$, $p = .00$). The c-path or the direct effect (Uniqueness level $\rightarrow$ Quality) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = .1497$, $SE = .2351$, %95 CI [-.3169, .6163], $t = .6366$, $p = .53$). The analysis of the

regressive model indicated that there is not an overall significant (mediation) indirect effect (%95 CI [-.4782, .1713]) on quality perception.

Durability: The a-path of the mediation (Uniqueness level -> Felt Specialness) is not significant for the one-of-a-kind vs. few-of-a-kind ($\beta = -.3462$, $SE = 0.3557$, %95 CI [-1.0521, .3598], $t = -.9731$, $p = .333$). The b-path of the mediation (Felt Specialness -> Durability) is significant ($\beta = .3422$, $SE = .0646$, %95 CI [.2140, .4704], $t = 5.297$, $p = .00$). The c-path or the direct effect (Uniqueness level -> Durability) is not significant for the one-of-a-kind vs. few-of-a-kind backpack uniqueness levels ($\beta = -.1428$, $SE = .2286$, %95 CI [-.5964, .3109], $t = -.6245$, $p = .53$). The analysis of the regressive model indicated that there is not an overall significant (mediation) indirect effect (%95 CI [-.3759, .1245]) on durability perception.

3.4.2.1.4 Perceived Uniqueness and Felt Specialness in Serial Mediation

Perceived Uniqueness: 2x2 ANOVA is conducted to estimate the perceived uniqueness differences across the uniqueness level of the products and the two types of framing. The three items on the perceived uniqueness scale ($M = 5.36$, $SD = 1.4$, $\alpha = .76$) were averaged, and higher scores indicated a higher perceived uniqueness.

The average scores of the perceived uniqueness scale as the dependent variable and uniqueness level of the product (one-of-a-kind and few-of-a-kind) as the independent variable, along with framing type (uniqueness and typicality) showed that participants in the few-of-a-kind condition with uniqueness framing have significantly higher perceived uniqueness than participants in the few-of-a-kind condition with typicality framing ($M_{\text{few-typicality}} = 4.87$, $M_{\text{few-uniqueness}} = 5.30$, $F(1,197) = 3.96$, $p = .048$). Framing type did not have a significant effect on perceived uniqueness for the one-of-a-kind condition ($M_{\text{one-typicality}} = 5.70$, $M_{\text{one-uniqueness}} = 5.64$, $F(1,197) = 0.75$, $p = .784$).

In the subsequent mediation analysis, the independent variable consisted of the one-of-a-kind and few-of-a-kind conditions within the typicality frame. Similar to Study 1, perceived uniqueness was utilized as the first mediator and felt specialness as the second mediator in this analysis.

3.4.2.1.5 Typicality frame

Purchase intention: The results reveal that the uniqueness level of the upcycled product with a typicality frame has an indirect effect on purchase intention in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant (serial mediation) indirect effect of 0.43 (%95 CI [.1834, .7367]), which suggests that the one-of-a-kind vs. few-of-a-kind uniqueness levels show a significant indirect effect on purchase intention.

Liking: The results reveal that the uniqueness level of the upcycled product with a typicality frame has an indirect effect on liking in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant (serial mediation) indirect effect of 0.37 (%95 CI [.1556, .6598]), which suggests that the one-of-a-kind vs. few-of-a-kind uniqueness levels show a significant indirect effect on liking.

WTP: The results reveal that the uniqueness level of the upcycled product with a typicality frame has an indirect effect on WTP in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant (serial mediation) indirect effect of 3.27 (%95 CI [.9226, 6.5642]), which suggests that the one-of-a-kind vs. few-of-a-kind uniqueness levels show a significant indirect effect on WTP.

Quality: The results reveal that the uniqueness level of the upcycled product with a typicality frame has an indirect effect on quality perception in the presence of perceived uniqueness and felt specialness with a 95% confidence interval not including 0. The analysis of the regressive model indicated an overall significant (serial mediation) indirect effect of 0.13 (%95 CI [.0422, .2564]), which suggests that the one-of-a-kind vs. few-of-a-kind uniqueness levels show a significant indirect effect on quality perception.

Durability: The results reveal that the uniqueness level of the upcycled product with a typicality frame has not an indirect effect on durability perception in the presence of perceived uniqueness and felt specialness. The analysis of the regressive model did not indicate an overall significant (serial mediation) indirect effect (%95 CI [-.0159, .1674]) on durability perception.

3.4.2.1.6 Uniqueness frame

Purchase intention: The results reveal that the uniqueness level of the upcycled product with a uniqueness frame has not an indirect effect on purchase intention in the presence of perceived uniqueness and felt specialness. The analysis of the regressive model indicated that there is not an overall significant (serial mediation) indirect effect (%95 CI [-.0470, .3878]) on purchase intention.

Liking: The results reveal that the uniqueness level of the upcycled product with a uniqueness frame has not an indirect effect on liking in the presence of perceived uniqueness and felt specialness. The analysis of the regressive model indicated that there is not an overall significant (serial mediation) indirect effect (%95 CI [-.0458, .3703]) on liking.

WTP: The results reveal that the uniqueness level of the upcycled product with a uniqueness frame has not an indirect effect on WTP in the presence of perceived uniqueness and felt specialness. The analysis of the regressive model indicated that there is not an overall significant (serial mediation) indirect effect (%95 CI [-.8792, 7.4219]) on WTP.

Quality: The results reveal that the uniqueness level of the upcycled product with a uniqueness frame has not an indirect effect on quality perception in the presence of perceived uniqueness and felt specialness. The analysis of the regressive model indicated that there is not an overall significant (serial mediation) indirect effect (%95 CI [-.0277, .2611]) on quality perception.

Durability: The results reveal that the uniqueness level of the upcycled product with a uniqueness frame has not an indirect effect on durability perception in the presence of perceived uniqueness and felt specialness. The analysis of the regressive model indicated that there is not an overall significant (serial mediation) indirect effect (%95 CI [-.0146, .1635]) on durability perception.

3.4.2.2 Discussion

In Study 2, a manipulation for uniqueness was introduced. After product descriptions were presented, a uniqueness frame was employed to manipulate the perceived uniqueness of the product further. This manipulation was anticipated to enhance the perceived uniqueness within the uniqueness frame or diminish it within the typicality frame. It was posited that exposing a uniqueness frame would heighten participants' perception of uniqueness when evaluating a few-of-a-kind backpack. Conversely, it was anticipated that exposing a typicality frame would diminish the perceived uniqueness among participants evaluating a few-of-a-kind backpack. One-of-a-kind upcycled products were posited to have the same levels of perceived uniqueness across uniqueness

and typicality frames. All other aspects of the studies were replicated from Study 1, excluding the regular uniqueness of the upcycled product.

Preliminary analysis across the typicality and uniqueness frames reveals an important outcome. The few-of-a-kind uniqueness type exhibited a statistically significant difference when frames were switched from typicality to uniqueness for both perceived uniqueness and felt specialness variables. The typicality and uniqueness frames significantly influenced the few-of-a-kind uniqueness type, demonstrating a consumer perception shift. Conversely, the one-of-a-kind uniqueness type showed no statistically significant difference between the typicality or uniqueness frames for either perceived uniqueness or felt specialness variables. Even though the product is defined as one-of-a-kind, a backpack still functions as a backpack, and such a way of thinking about utility was expected to lower the perceived uniqueness of the product. The findings depicted an intriguing image and suggested that one-of-a-kind unique products may be immune to manipulation using this framework, or a more robust manipulation utilizing a different framework is required to observe differing results for the two mediating variables. The insignificance within the uniqueness frame has repercussions on the mediation analysis, which will be further discussed in this section.

Within the typicality frame, the results show no statistically significant direct effects. No relationships between uniqueness type and purchase intention, product liking, consumers' WTP, and consumers' perceptions of quality and durability exhibited statistically significant direct effects. This aligns with Study 1, which confirmed the statistical insignificance of direct effects.

Within the typicality frame, felt specialness was used as a mediator, and the results depict an interesting scenario. The mediation effect of felt specialness between uniqueness type and

consumer purchase intention, product liking, and WTP was significant. These results imply that when a consumer's perceived uniqueness of the upcycled product was manipulated to a lower level using a typicality frame, the difference is still prevalent between one-of-a-kind and few-of-a-kind unique products, with the mediating effect being positive, suggesting that consumers find one-of-a-kind unique upcycled products more appealing than few-of-a-kind unique upcycled products. Interestingly, perceived quality was also found to have a statistically significant mediated effect from felt specialness, while perceived durability found no statistical significance. The insignificance of the mediation for perceived quality and durability suggests either: (1) the uniqueness framework had an unexpected effect on perceived durability, which equalized the two groups, or (2) the initial results from Study 1 were not replicable for perceived durability.

A different perspective occurs when the manipulation is switched to the uniqueness frame. Within the uniqueness frame, there was no statistically significant difference between few-of-a-kind and one-of-a-kind variables for perceived uniqueness or felt specialness. Since these two variables serve as the “a” path within the mediation, no significant relationship was found within the uniqueness frame. Specifically, no statistically significant mediation effect was exhibited when the mediator was felt specialness, and the dependent variable was consumer purchase intention, product liking, WTP, perceived quality, or durability.

This study has also explored the possibility of a serial mediation, using uniqueness type as the independent variable, perceived uniqueness as the first mediator, felt specialness as the second mediator, and the dependent variables being the same as the previous analyses - purchase intention, product liking, WTP, perceived quality and durability. As described previously, within this serial

mediation, uniqueness type would impact perceived uniqueness, which would affect the consumer's felt specialness, resulting in a difference in the dependent variables.

Within the framework of typicality, serial mediation proved to be statistically significant. As observed in the single mediation, perceived quality exhibited a statistically significant positive relationship, while the relationship with perceived durability was not statistically significant. In the serial mediation process, the type of the upcycled product positively influences the consumer's perceived uniqueness, enhancing the consumer's felt specialness, subsequently boosting their purchase intention, product liking, and WTP. The statistical significance of perceived quality, contrasted with the non-significant result for perceived durability, can be linked to the two factors as mentioned earlier, possibly warranting further analysis.

This analysis yielded four significant findings. Firstly, utilizing a uniqueness frame boosts the perceived uniqueness of few-of-a-kind upcycled products to a level comparable to that of singular, one-of-a-kind items. This implies that firms could deploy a “limited-edition uniqueness” narrative coupled with a similar uniqueness frame to replicate the effect of “one-of-a-kind” uniqueness. Secondly, the perceived uniqueness evoked by descriptions of one-of-a-kind products remains resistant to alterations using the typicality-uniqueness paradigm. Thirdly, the serial mediation model established a more nuanced relationship between the product's uniqueness level and the dependent variables. In this model, the type of uniqueness affects the consumer's perception of the product's uniqueness, which then impacts their sense of specialness, culminating in increased purchase intention, product liking, and WTP. Lastly, while this analysis corroborated the outcomes from Study 1, some areas of interest could warrant further investigation.

This Study has adopted a product-oriented approach toward the concept of uniqueness, focusing solely on the unique characteristics of upcycled products. However, it should be acknowledged that consumers may also desire to seek out and acquire unique products, a phenomenon appropriately termed as the need for uniqueness. The subsequent study will extend its focus to explore the potential influence of this consumer-side trait.

3.4.3 Study 3

Design: This study had an Upcycled Product's Uniqueness level (one-of-a-kind vs. few-of-a-kind vs. control) between-subjects design.

Procedure: 150 participants participated in the Prolific experiment in exchange for money.

The participants were randomly assigned into three groups with product descriptions: a one-of-a-kind upcycled product, a few-of-a-kind upcycled product, or a regular upcycled product. According to their group assignment, they were shown one of the three texts for the uniqueness manipulation. Within each experimental condition, a backpack was presented, featuring varying degrees of uniqueness-related information about the backpack's upcycled nature, the same as in Study 1.

The remaining questions asked in the study followed a similar structure as described in Study 1. However, in addition to Study 1, the CNFU has been assessed by the scale developed by Tian and McKenzie (2001). A 5-point Likert scale was employed, as recommended by the authors, with responses ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Based on the factor loadings, the scale revealed three groups representing different uniqueness needs. Specifically, this

study utilized the dimensions of "CCC" and "AS" (see Appendix), while the remaining dimension of "UCC" was not utilized.

3.4.3.1 Results

150 participants were recruited in Prolific, but one of the participants failed the attention checks.

Dependent variable: Purchase intention ($M=3.10$, $SD=1.80$), liking ($M=3.80$, $SD=1.65$), WTP ($M=44.85$, $SD=57.08$), quality ($M=4.74$, $SD=1.33$), durability ($M=5.11$, $SD=1.23$) are used as the dependent variable.

Felt specialness ($M=3.70$, $SD= 1.8$) is used as the mediator. CNFU scale, CCC ($M=2.67$, $SD=.084$, $\alpha = .96$), and AS ($M=2.20$, $SD= .078$, $\alpha = .95$) are used as moderators.

Mediation and moderation: PROCESS is employed, developed by Andrew Hayes (Hayes 2012), in the analysis to perform the mediation and moderation.

In our study, the independent variable is multicategorical, encompassing three levels: (1) the upcycled backpack without any uniqueness information, (2) the upcycled backpack identified as one among 60 items, and (3) the upcycled backpack presented as the only one in existence.

In order to comprehensively examine the impact of CNFU levels on various aspects such as product liking, purchase intention, WTP, quality perception, and durability perception, an in-depth spotlight analysis was executed using SPSS. The calculation of medians for each dimension resulted in medians of 2.73 for the CCC dimension and 2.00 for the AS dimension. Through a categorization process, participants were classified into two groups for each dimension: individuals exhibiting high levels of NFU if their cumulative scores surpassed the corresponding dimension's median, and conversely, those with scores below the respective median were

categorized as demonstrating low levels of NFU. We assessed the mediating role of felt specialness with the levels of NFU and the uniqueness levels of upcycled products.

Additionally, to analyze the moderation effect, PROCESS's Model 1 multicategorical moderation analysis was employed to analyze the moderation effect.

3.4.3.1.1 Consumers' Need for Uniqueness Levels in Spotlight Analysis

3.4.3.1.2 Felt Specialness as Mediator

3.4.3.1.2.1 *High levels of Creative Choice Counterconformity (CCC)*

The mediation analysis was conducted with participants with high levels of CCC. There was no significant direct effect of both the one-of-a-kind (3) vs. control (1) and few-of-a-kind uniqueness levels (2) vs. control (1) on purchase intention, product liking, WTP, quality perception, and durability perception.

Purchase intention: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 0.91 (%95 CI [.2315, 1.7172]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on purchase intention. Further, the regressive model indicated an overall significant (mediation) indirect effect of 0.87 (%95 CI [.1414, 1.6387]), which suggests that the few-of-a-kind uniqueness level (2) vs. control (1) shows a significant indirect effect on purchase intention.

Liking: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 0.76 (%95 CI [.1780, 1.4275]), which suggests that the one-of-a-kind uniqueness level (3) vs control (1) shows a significant indirect effect on product liking. Further, the regressive model

indicated an overall significant (mediation) indirect effect of 0.72 (%95 CI [.1177, 1.4387]), which suggests that the few-of-a-kind uniqueness level (2) vs. control (1) shows a significant indirect effect on product liking.

WTP: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 18.34 (%95 CI [2.9541, 42.7473]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on WTP. Further, the regressive model indicated an overall significant (mediation) indirect effect of 17.36 (%95 CI [2.6773, 40.2881]), which suggests that the few-of-a-kind uniqueness (2) vs. control (1) level shows a significant indirect effect on WTP.

Quality: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of .42 (%95 CI [.0697, .9007]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on quality perception. Further, the regressive model indicated an overall significant (mediation) indirect effect of .39 (%95 CI [.0477, .9479]), which suggests that the few-of-a-kind uniqueness level (2) vs. control (1) shows a significant indirect effect on quality perception.

Durability: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of .35 (%95 CI [.0638, .7806]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on durability perception. Further, the regressive model indicated an overall significant (mediation) indirect effect of .33 (%95 CI [.0404, .8082]), which suggests that the few-of-a-kind uniqueness level (2) vs. control (1) shows a significant indirect effect on durability perception.

3.4.3.1.2.2 Low levels of Creative Choice Counterconformity (CCC)

The mediation analysis was conducted with participants with low levels of CCC. There was no significant direct effect of both the one-of-a-kind (3) vs. control (1) and few-of-a-kind uniqueness levels (2) vs. control (1) on purchase intention, product liking, WTP, quality perception, and durability perception.

Purchase intention: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 0.64 (%95 CI [.1121, 1.1916]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on purchase intention. The analysis of the regressive model indicated that the few-of-a-kind uniqueness level (2) vs. control (1) shows not an overall significant (mediation) indirect effect (%95 CI [-.0441, 1.0309]) on purchase intention.

Liking: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 0.65 (%95 CI [.1151, 1.1930]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on product liking. The analysis of the regressive model indicated that the few-of-a-kind uniqueness level (2) vs. control (1) shows not an overall significant (mediation) indirect effect (%95 CI [-.0388, 1.0757]) on product liking.

WTP: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of 8.09 (%95 CI [1.4179, 15.8060]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on WTP. The analysis of the regressive model indicated that the few-of-a-kind uniqueness level (2) vs. control (1) shows not an overall significant (mediation) indirect effect (%95 CI [-.4902, 13.1577]) on WTP.

Quality: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of .43 (%95 CI [.0657, .8817]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on quality perception. The analysis of the regressive model indicated that the few-of-a-kind uniqueness level (2) vs. control (1) shows not an overall significant (mediation) indirect effect (%95 CI [-.0215, .7512]) on quality perception.

Durability: The analysis of the regressive model indicated an overall significant (mediation) indirect effect of .34 (%95 CI [.0441, .7496]), which suggests that the one-of-a-kind uniqueness level (3) vs. control (1) shows a significant indirect effect on durability perception. The analysis of the regressive model indicated that the few-of-a-kind uniqueness level (2) vs. control (1) shows not an overall significant (mediation) indirect effect (%95 CI [-.0260, .6476]) on durability perception.

3.4.3.1.2.3 High levels of Avoidance of Similarity (AS)

The mediation analysis was conducted with participants with high levels of AS. There was no significant direct effect of both the one-of-a-kind (3) vs. control (1) and few-of-a-kind uniqueness levels (2) vs. control (1) on purchase intention, product liking, WTP, quality perception, and durability perception.

There was a significant mediation effect of felt specialness between one-of-a-kind uniqueness level (3) vs. control (1) and few-of-a-kind uniqueness level (2) vs. control (1) on purchase intention, product liking, WTP, quality perception, and durability perception. (Purchase intention: (.93, %95 CI_{one} [.2276, 1.6824]; .84, %95 CI_{few} [.0930, 1.6029], Product liking: (.85, %95 CI_{one} [.2134, 1.4986]; .77, %95 CI_{few} [.0769, 1.5253], WTP: (19.27, %95 CI_{one} [3.6996, 42.9358]; 17.52, %95

CI_{few} [2.3784, 39.5386], Quality perception: (.51, %95 CI_{one} [.1256, .9956]; .46, %95 CI_{few} [.0376, 1.0385], Durability perception: (.46, %95 CI_{one} [.1123, .9006]; .42, %95 CI_{few} [.0463, .9361]))

3.4.3.1.2.4 Low levels of Avoidance of Similarity (AS)

The mediation analysis was conducted with participants with low levels of AS. There was no significant direct effect of both the one-of-a-kind (3) vs. control (1) and few-of-a-kind uniqueness levels (2) vs. control (1) on product liking, WTP, quality perception, and durability perception. Only there was a direct effect of one-of-a-kind (3) vs. control (1) and few-of-a-kind uniqueness levels (2) vs. control (1) purchase intention ($\beta_{one} = -1.1073$, $SE_{one} = 0.4474$, %95 CI [-1.9991, -.2154], $t_{one} = -2.47$, $p_{one} = .01$; $\beta_{few} = -1.0127$, $SE_{few} = 0.4070$, %95 CI [-1.8241, -.2012], $t_{few} = -2.48$, $p_{few} = .01$)

There was a significant mediation effect of felt specialness between one-of-a-kind uniqueness level (3) vs. control (1) and few-of-a-kind uniqueness level (2) vs. control (1) on purchase intention, product liking, WTP, quality perception, and durability perception. (Purchase intention: (.84, %95 CI_{one} [.2531, 1.5094]; .61, %95 CI_{few} [.0488, 1.2501], Product liking: (.75, %95 CI_{one} [.2533, 1.3430]; .55, %95 CI_{few} [.0526, 1.1664], WTP: (11.27, %95 CI_{one} [2.9791, 22.9322]; 8.25, %95 CI_{few} [.8511, 18.4941], Quality perception: (.44, %95 CI_{one} [.1123, .9161]; .32, %95 CI_{few} [.0360, .7558], Durability perception: (.33, %95 CI_{one} [.0455, .7886]; .24, %95 CI_{few} [.0129, .6222]))

3.4.3.2 Consumers' Need for Uniqueness as Moderator

3.4.3.2.1 Creative Choice Counterconformity

The study assessed the moderating role of the CNFU (CCC) on the relationship between upcycled product type (one-of-a-kind, few-of-a-kind, and regular) and each dependent variable (purchase intention, product liking, WTP, quality perception and durability perception).

The results revealed that CCC has not a significant moderating effect on the relationship between upcycled product type ($\beta_{\text{one}} = .4364$, $SE_{\text{one}} = 0.3286$, %95 CI [-.2131, 1.0858], $t_{\text{one}} = 1.32$, $p_{\text{one}} = .18$; $\beta_{\text{few}} = .4726$, $SE_{\text{few}} = 0.3559$, %95 CI [-.2310, 1.1762], $t_{\text{few}} = 1.32$, $p_{\text{few}} = .18$) and purchase intention.

Similarly, the analysis of the regressive model indicated CCC does not have a significant moderation effect on any of the dependent variables (Product liking: ($\beta_{\text{one}} = .3275$, $SE_{\text{one}} = 0.3011$, %95 CI [-.2677, .9228], $t_{\text{one}} = 1.08$, $p_{\text{one}} = .27$; $\beta_{\text{few}} = .3267$, $SE_{\text{few}} = 0.3262$, %95 CI [-.3182, .9715], $t_{\text{few}} = 1.00$, $p_{\text{few}} = .31$), WTP: ($\beta_{\text{one}} = -2.2340$, $SE_{\text{one}} = 10.5155$, %95 CI [-23.0200, 18.5520], $t_{\text{one}} = -.2124$, $p_{\text{one}} = .83$; $\beta_{\text{few}} = -7.8217$, $SE_{\text{few}} = 11.3922$, %95 CI [-30.3407, 14.6973], $t_{\text{few}} = -.686$, $p_{\text{few}} = .49$), Quality perception: ($\beta_{\text{one}} = .1191$, $SE_{\text{one}} = 0.2536$, %95 CI [-.3822, .6204], $t_{\text{one}} = .469$, $p_{\text{one}} = .63$; $\beta_{\text{few}} = -.0212$, $SE_{\text{few}} = 0.2748$, %95 CI [-.5644, .5219], $t_{\text{few}} = -.077$, $p_{\text{few}} = .93$), Durability perception: ($\beta_{\text{one}} = .2158$, $SE_{\text{one}} = 0.2309$, %95 CI [-.2406, .6722], $t_{\text{one}} = .934$, $p_{\text{one}} = .35$; $\beta_{\text{few}} = -.0535$, $SE_{\text{few}} = 0.2502$, %95 CI [-.5480, .4410], $t_{\text{few}} = -.213$, $p_{\text{few}} = .83$))

3.4.3.2.2 Avoidance of Similarity

The study assessed the moderating role of the CNFU (AS) on the relationship between upcycled product type (one-of-a-kind, few-of-a-kind, and regular) and each dependent variable (purchase intention, liking, WTP, quality perception and durability perception).

Similarly, the analysis of the regressive model indicated AS does not have a significant moderation effect on any of the dependent variables (Purchase intention: ($\beta_{\text{one}} = .7631$, $SE_{\text{one}} = 0.4021$, %95 CI [-.0316, 1.5579], $t_{\text{one}} = 1.89$, $p_{\text{one}} = .059$; $\beta_{\text{few}} = .7795$, $SE_{\text{few}} = 0.4075$, %95 CI [-.0260, 1.5850], $t_{\text{few}} = 1.91$, $p_{\text{few}} = .057$) , Product liking: ($\beta_{\text{one}} = .3331$, $SE_{\text{one}} = 0.3749$, %95 CI [-.4079, 1.0741], $t_{\text{one}} = .88$, $p_{\text{one}} = .37$; $\beta_{\text{few}} = .3467$, $SE_{\text{few}} = 0.3799$, %95 CI [-.4043, 1.0977], $t_{\text{few}} = .91$, $p_{\text{few}} = .36$), WTP: ($\beta_{\text{one}} = -12.0366$, $SE_{\text{one}} = 13.0463$, %95 CI [-37.8251, 13.7519], $t_{\text{one}} = -.9226$, $p_{\text{one}} = .35$; $\beta_{\text{few}} = -18.7998$, $SE_{\text{few}} = 13.2231$, %95 CI [-44.9378, 7.3383], $t_{\text{few}} = -.922$, $p_{\text{few}} = .15$), Quality perception: ($\beta_{\text{one}} = .2156$, $SE_{\text{one}} = 0.3108$, %95 CI [-.3989, .8300], $t_{\text{one}} = .693$, $p_{\text{one}} = .48$; $\beta_{\text{few}} = .1174$, $SE_{\text{few}} = 0.3151$, %95 CI [-.5054, .7401], $t_{\text{few}} = .372$, $p_{\text{few}} = .71$), Durability perception: ($\beta_{\text{one}} = .1738$, $SE_{\text{one}} = 0.2871$, %95 CI [-.3937, .7414], $t_{\text{one}} = .605$, $p_{\text{one}} = .54$; $\beta_{\text{few}} = -.0695$, $SE_{\text{few}} = 0.2871$, %95 CI [-.3937, .7414], $t_{\text{few}} = .605$, $p_{\text{few}} = .54$))

3.4.3.3 Discussion

In the context of Study 3, an additional variable is added— CNFU—to examine how this consumer-centric character trait could influence the findings obtained thus far.

Replicating the procedure from Study 1, participants are presented with a similar study, followed by a set of questions designed to measure their CNFU (Tian and McKenzie 2001). We hypothesized that an elevated need for uniqueness would lead to a stronger relationship between a unique product and the consumer's purchase intention, product liking, and WTP. Given the relationship dynamics, the CNFU is proposed to moderate the relationship between the uniqueness type of the upcycled product and the consumer's purchase intention, product liking, and WTP.

As discussed previously in the theoretical framework section, this research chooses only include two out of the three CNFU dimensions: CCC and AS, as the UCC was deemed unfit for the context of upcycled products. The analysis of these two dimensions was carried out using a spotlight analysis utilizing two sub-groups: high and low, which generates four groups for the analysis: high CCC, low CCC, high AS, and low AS.

Within each of these four groups, the impact of the uniqueness level of a product on the purchase intention, product liking, WTP, quality perception and durability perception was measured (5-DVs), with felt specialness as the mediator.

Across all four groups, aside from a single instance involving few-of-a-kind upcycled versus regular products and purchase intention within the low-AS group, no statistically significant direct relationship between product uniqueness levels and the five dependent variables (5-DVs) was evident. This solitary significant direct relationship, exclusive to a particular case, is deemed non-repeatable due to its absence in both this and preceding studies.

Within all four groups, a statistically significant mediated relationship was identified, linking one-of-a-kind upcycled products to the 5-DVs via the intermediary variable of felt specialness. This observation reaffirms prior findings that the uniqueness of upcycled products increases the felt specialness of the consumers, thereby positively influencing their purchase intention, product liking, WTP, and perceptions of product quality and durability. This relationship has been consistently supported in numerous studies.

Comparing low-AS and high-AS groups' findings, no significant trends emerged in the mediated relationships. Both one-of-a-kind and few-of-a-kind vs. regular upcycled products demonstrated

statistically significant mediated relations with the 5-DVs, facilitated by felt specialness as the mediator.

Notably, when comparing low-CCC and high-CCC outcomes, the relationship between few-of-a-kind vs. regular upcycled products and the 5-DVs, mediated by felt specialness, displayed a shift in statistical significance. In the low-CCC group, few-of-a-kind upcycled products were not statistically different from the regular upcycled products, but for the high-CCC group, few-of-a-kind products depicted a statistically significant difference against regular upcycled products. This observation suggests that in the context of low CCC, the distinctive uniqueness of few-of-a-kind upcycled products does not instill a difference in felt specialness, resulting in negligible disparities across the 5-DVs. Conversely, increased CCC fosters a stronger preference for few-of-a-kind upcycled products over regular upcycled products, driven by the enhanced felt specialness elicited by the former. This underscores the emphasis on few-of-a-kind upcycled products primarily resonates with consumers exhibiting high-CCC.

This study also underscores the adaptable nature of consumer purchase desire for few-of-a-kind vs. regular upcycled products. Low levels of CCC do not present a distinct preference, while high levels of CCC correspond to a preference for few-of-a-kind upcycled products over regular alternatives,

This study, centered on only assessing CNFU values without manipulation, lays the groundwork for potential future research. Manipulative interventions could be utilized to test whether increased purchase desire can be elicited. Such interventions might subsequently find practical applications in marketing campaigns, fostering upcycling support and reducing environmental resource consumption.

3.5 General Discussion

3.5.1 Summary of Findings

The research presented in this chapter focuses on investigating the relationship between levels of product uniqueness (one-of-a-kind, few-of-a-kind, and regular upcycled products) and specific attitudes towards the product, as well as purchase intentions. Additionally, the studies explore the roles of perceived uniqueness, uniqueness framing, and the consumer's inherent need for uniqueness in shaping these relationships.

Study 1 initially conducted statistical tests that did not reveal significant differences between one-of-a-kind and regular, or few-of-a-kind and regular upcycled products regarding liking, purchase intention, and WTP. This finding does not support H1. Study 1 also involved two mediation analyses. The first considered whether the product's uniqueness level impacts the consumer's felt specialness, which subsequently influences liking, purchase intention, and WTP. Results indicated a significant indirect relationship for one-of-a-kind and few-of-a-kind vs. regular upcycled products, supporting H2. However, this mediation was not significant for one-of-a-kind vs. few-of-a-kind upcycled products. The second mediation analysis explored serial mediation, incorporating perceived uniqueness, and felt specialness of the consumer. This was found to be significant for one-of-a-kind vs. both few-of-a-kind and regular upcycled products, suggesting a distinction that requires further exploration.

Study 2 omitted regular upcycled products and introduced uniqueness framing. This study, like Study 1, did not yield statistically significant results in direct relationships. Two mediation analyses akin to Study 1 are employed in Study 2. First, using felt specialness as a mediator, results

reveal no significant difference between one-of-a-kind and few-of-a-kind upcycled products within the uniqueness-frame. This suggests the disappearance of the indirect relationship previously seen in Study 1. Within the typicality-frame, a pronounced difference emerges between these two uniqueness levels.

The second mediation analysis, building upon Study 1's serial mediation, adds the uniqueness framing dimension. Outcomes align with the first analysis in Study 2, indicating no significant differences in perceived uniqueness between one-of-a-kind and few-of-a-kind upcycled products within the uniqueness-frame. This supports H3a by elevating few-of-a-kind upcycled products' perceived uniqueness to one-of-a-kind levels. A significant finding in Study 2 is that perceived uniqueness of one-of-a-kind upcycled products remains consistent across uniqueness and typicality frames. This implies manipulating perceived uniqueness through consumer imagination of typical or unique features is unviable, suggesting potential avenues for future research.

Study 2 additionally permits a comparative analysis of few-of-a-kind upcycled products in uniqueness and typicality frames, demonstrating a significant difference in perceived uniqueness between the two conditions, substantiating H3a and H3b. In essence, Study 2's manipulation of uniqueness shows that the mediated relationship from uniqueness type to product liking, purchase intention, and WTP can be altered, with felt specialness acting as the intermediary.

In Study 3, which explored three levels of uniqueness with felt specialness as a mediator and two CNFU dimensions as moderators, intriguing results emerged. One of the CNFU dimensions, AS which is defined as centered on being different from others, yielded mediated relationships but no significant difference between one-of-a-kind and few-of-a-kind products. Interestingly with higher levels of CCC, both one-of-a-kind and few-of-a-kind upcycled products showcased significant

mediated relationships in terms of product attitudes and purchase intentions compared to regular upcycled products. When CCC was lower, the one-of-a-kind upcycled products stood out prominently. These findings highlight that consumers with lower CCC levels differentiate more distinctly between one-of-a-kind and few-of-a-kind upcycled products. These insights demonstrate support Hypothesis 4 in the context of the CCC dimension of CNFU.

A comparative table synthesizing the structure of the studies is provided below for reference.

Table 2 - Summary of the configuration of studies for Essay 2

Study	Hypothesis tested	Objective	Uniqueness Level	Product	Design	Dependent Variables
Study 1	H1 & H2	-To test the preference for different levels of uniqueness of upcycled products -To test the felt specialness mediation	One-of-a-kind vs. Few-of-a-kind vs. Regular	Upcycled Backpack	Three factorial (one-of-a-kind vs. few-of-a-kind vs. regular)	Product liking & Purchase intention & WTP & Quality & Durability
Study 2	H2 & H3a & H3b	To test the effect of framing type on different levels of uniqueness of upcycled products	One-of-a-kind vs. Few-of-a-kind	Upcycled Backpack	Uniqueness level (one-of-a-kind vs. few-of-a-kind) x Frame type (unique vs. typical)	Product liking & Purchase intention & WTP & Quality & Durability
Study 3	H4	To test the effect of the need for uniqueness on different levels of uniqueness of upcycled products	One-of-a-kind vs. Few-of-a-kind vs. Regular	Upcycled Backpack	Three factorial (one-of-a-kind vs. few-of-a-kind vs. regular)	Product liking & Purchase intention & WTP & Quality & Durability

3.5.2 Theoretical Contributions

This research introduces a novel angle to the study of sustainable products by emphasizing their inherent uniqueness. Particularly in the case of upcycled products, the distinct wear-and-tear of the material endows each item with a unique identity (Bhatt et al. 2019; Pham et al. 2021; Slettenhaar 2021; Yu and Lee 2019). However, when products are crafted from a batch of material sharing similar wear-and-tear attributes, this distinctiveness diminishes yet they are still called unique (Pretner et al. 2021). To date, the academic discourse has not sufficiently delved into this dimension of uniqueness in the context of upcycled products, making this exploration both novel and timely.

The concept of few-of-a-kind uniqueness has been introduced and it aligns seamlessly with the sustainable products category, providing a broader spectrum of uniqueness for investigation. While the notion of one-of-a-kind products being strictly unique is established in recent research (Krause et al. 2023), it was only studied in mass customization as a value driver in non-sustainable products. This thesis allows to expand the knowledge between the most extreme form of uniqueness to few-of-a-kind of uniqueness in upcycled products.

A nuanced observation was the mediation of these relationships through the consumer's felt specialness. This suggests that strategies which effectively blend the aspects of uniqueness and evoked feelings of specialness could wield significant impact in the marketplace. Additionally, the efficacy of the uniqueness-frame and typicality-frame (Ames and Iyengar 2005) in shaping consumer perceptions for upcycled products was affirmed within this study.

A particularly intriguing finding was the malleability of perceived uniqueness for few-of-a-kind products, opening the door for future research endeavors in this domain. Conversely, the one-of-a-kind classification, stood its ground with a non-negotiable perception of uniqueness. This finding underscores the inherent importance of uniqueness in consumers' minds, and it presents challenges and opportunities for researchers to explore further.

3.5.3 Managerial Implications

Uniqueness has been empirically recognized as a pivotal aspect in marketing and advertising, with emerging brands emphasizing bespoke products tailored to individual customers (De Bellis et al. 2016). The primary contribution of this chapter delves into the influence of uniqueness on consumer preferences for upcycled products. For distinctly unique, one-of-a-kind upcycled products, it's imperative for firms to distinctly highlight this attribute, as it can augment the consumer's purchase intent. Such singularity is inherently resistant to external influences, rendering it challenging to manipulate.

Contrastingly, few-of-a-kind upcycled products do not maintain the same invariability. Disparities were observed in perceived uniqueness based on framing techniques and certain facets of the CNFU (Tian et al. 2001). This suggests the potential to modify consumer perceptions regarding a product's singularity. For enterprises emphasizing few-of-a-kind upcycled products, framing the product within a context of uniqueness and prompting consumers to envisage its distinct attributes can foster increased purchase intent. Moreover, orienting their marketing strategies towards consumers exhibiting higher degrees of CCC can further amplify this intent.

In summation, accentuating an upcycled product's overall uniqueness, prompting consumers to envision its unique attributes, and targeting those with pronounced CCC are strategies poised to enhance purchase intent.

3.5.4 Limitations and Directions for Future Research

This study has delved deeply into the role of uniqueness in influencing consumer perceptions and intentions to purchase upcycled products, yielding insights while also spotlighting areas meriting further exploration.

An intriguing avenue for future research could emerge from the consistent perceived uniqueness attributed to one-of-a-kind upcycled products. Despite employing manipulations inspired by Ames and Iyengar (2005), this perception remained unwavering. Unpacking the underlying reasons for such steadfast perceptions could elucidate the cognitive mechanisms consumers utilize when evaluating the singularity of upcycled products. Advancing new methodologies to manipulate perceived uniqueness would not only be invaluable for subsequent academic endeavors but could also offer strategic implications for industry practitioners.

Further, the results from the serial mediation underscore the potential existence of as-yet-unidentified variables that might differentiate one-of-a-kind from few-of-a-kind upcycled products, especially concerning product appreciation, purchasing intent, and willingness to invest. These elusive variables could be tethered to specific aspects of the product's description or even rooted in the idiosyncrasies of consumer profiles.

4 Conclusion

In the evolving landscape of environmental awareness, the merits of upcycling are gaining paramount significance. This is underscored by the increasing number of companies venturing into upcycling. This study already mentioned Freitag backpacks (freitag.ch) and ReWork upcycled pieces of clothing items (rework.ch), but there are many more, such as “Maple XO” making accessories from old skateboards (maplexo.com), bureo making apparel from used fishing nets (bureo.co), or Outerknown making garments out of used jeans (outerknown.com).

As the proliferation of upcycled products continues, there's a need for marketers to effectively position their sustainable offerings, simultaneously for consumers to gravitate towards eco-friendly choices. A swift adoption of these products is crucial for alleviating environmental concerns. This research thus delved into marketing paradigms for two primary categories of sustainable products: upcycled and recycled.

The first essay examined the connection between consumer's implicit self-theory and their preferences towards sustainable goods. It postulated that incremental theorists might gravitate towards upcycled products, given the inherent narrative of improvement in upcycling whereas entity theorists might favor recycled products, stemming from their disposition against change (Hui et al. 2012; Park and John 2010). A pivotal aspect also investigated was the influence of the percentage of sustainable raw materials embedded within a product. The findings underscored the

inclination of incremental theorists for upcycled products and entity theorists for recycled ones. Moreover, both groups showed an affinity for products with a higher sustainable content. The implications of the first essay extend to both academic and practical realms. For scholars, it offers a foundation for further analysis into enhancing consumers' inclinations towards sustainable products, using implicit self-theory. Concurrently, companies can harness the insights resulting from this essay to calibrate their product communication strategies. The empirical findings can guide decisions regarding allocation of resources, notably in the decision between upcycled and recycled product lines, contingent on the nuances of their target consumer demographics.

In the second essay of this research, the relationship between the uniqueness level of upcycled products, and purchase intention, product liking and WTP of the consumer was examined. Specifically, the second essay explored the differential interest elicited by one-of-a-kind vs. few-of-a-kind upcycled items. It was posited that the unique upcycled products would outperform regular upcycled items in consumer appeal, a relationship theorized to be mediated by the consumer's felt specialness. The introduction of uniqueness-frame and typicality-frame further nuanced the understanding, also providing differentiated consumer behaviors towards the aforementioned unique product categories. Notably, while no direct links between product uniqueness and key consumer metrics like purchase intention or WTP were found, an indirect influence via the felt specialness was empirically supported. Additionally, across the framing contexts, the one-of-a-kind upcycled products remained fixed in their uniqueness perceptions, whereas the few-of-a-kind items exhibited flexibility in these perceptions. On the corporate front, the findings serve as an advice for organizations, suggesting that emphasizing product uniqueness

could be a strategic benefit, amplifying consumer engagement by cooperating with their inherent desire for specialness.

The domain of sustainability and sustainable consumer behaviors continues to be vast and marked by numerous unresolved questions. This thesis offers a valuable contribution to this landscape. As the global focus intensifies on sustainable consumption, this thesis is aimed to steer both consumers and corporations towards a model of consumption that merges responsibility with gratification. In conclusion, as sustainable discussions grow, it remains imperative for scholarly endeavors, like the present research, to shape and refine our understanding of sustainable consumption for the collective well-being of society and our planet.

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Appendix

4.1 Appendix – Essay 1

4.1.1 Study 1

Implicit theory manipulation is adapted from Chiu et al. 1997.

Implicit Theory – Incremental theorist manipulation

Dr. George Medin served as the keynote speaker at the American Psychological Association's annual convention held at Washington D.C. in August, 2009. Dr. Medin is widely regarded for his work on the impact of personality vs. the environment in shaping human development.

In his speech, Medin argued that "no one's character is hard like a rock that it cannot be changed; everyone can change if they want to." He reported numerous large and compelling longitudinal studies which show that "people change and mature constantly and they can change their most basic nature, qualities, and characteristics."

He also reported on research that showed that people's personality characteristics could be changed even in their late sixties.

Implicit Theory – Entity theorist manipulation

Dr. George Medin served as the keynote speaker at the American Psychological Association's annual convention held at Washington D.C. in August, 2009. Dr. Medin is widely regarded for his work on the impact of personality vs. the environment in shaping human development.

In his speech, Dr. Medin argued that for most of us, "by the age of ten, our character has set like plaster and will never soften again." He reported numerous large and compelling longitudinal studies, which show that "people's development is largely determined by the enduring traits and dispositions that they were born with."

He also reported on research that showed that people's personality characteristics are fixed and cannot be changed.

Product manipulations are adapted from Adiguzel and Donato 2021; Bae 2021; Kamleitner et al. 2019.

Upcycled product information

A well-known bag producer has recently launched a new backpack which is manufactured by upcycling method.

Particularly, the upcycling based production process of the bag involves simply reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.

At the end of the upcycling process, the original form of the truck tarps is retained. They are just transformed into new, fashionable backpacks!

Conventional product information

A well-known bag producer has recently launched a new backpack.

The production process of the bag involves using the necessary fabrics, sewing them together with its straps and zippers into new backpacks.

At the end of the process, the materials are transformed into new, fashionable backpacks!

4.1.2 Study 2

Product manipulations are adapted from Adiguzel and Donato 2021; Bae 2021; Kamleitner et al. 2019.

Upcycled product information (Definition is the same as in study 1)

A well-known bag producer has recently launched a new backpack which is manufactured by upcycling method.

Particularly, the upcycling-based production process of the bag involves simply reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.

At the end of the upcycling process, the original form of the truck tarps is retained. They are just transformed into new, fashionable backpacks!

Recycled product information

A well-known bag producer has recently launched a new backpack which is manufactured by recycling method.

Particularly, the recycling-based production process of the bag involves fully downgrading the old truck tarps, which would otherwise be thrown away as waste, into raw materials and then converting them into new backpacks.

At the end of the recycling process, the truck tarps are totally destroyed. They are transformed into new, fashionable backpacks!

4.1.3 Pretest 2

Manufacturing Method Question - Multiple choice, only allowed for one answer

Choice randomization is used.

Imagine that you need to buy a backpack.

There are three different types of manufacturing methods of a backpack. Please read the descriptions of each manufacturing method below.

Keeping the price constant, which of the following manufacturing methods would you prefer for your backpack?

*-The backpack is manufactured by the **recycling** method.*

The recycling-based production process of the bag involves fully downgrading the old truck tarps, which would otherwise be thrown away as waste, into raw materials and then converting them into new backpacks.

At the end of the process, the truck tarps are totally destroyed. They are transformed into new, fashionable backpacks

*-The backpack is manufactured by the **upcycling** method.*

The upcycling-based production process of the bag involves simply reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.

At the end of the process, the original form of the truck tarps is retained. They are just transformed into new, fashionable backpacks!

*-The backpack is manufactured by the **conventional** method.*

The conventional production process of the bag involves using necessary fabrics similar to truck tarps, which are made just to produce this backpack, sewing them together with its straps and zippers into new backpacks.

At the end of the process, the materials are transformed into new, fashionable backpacks!

4.1.4 Study 3

Manufacturing Method Question - Multiple choice, only allowed for one answer

Choice randomization is used.

Imagine that you need to buy a backpack.

There are three different types of manufacturing methods of a backpack. Please read the descriptions of each manufacturing method below.

Keeping the price constant, which of the following manufacturing methods would you prefer for your backpack?

*-The backpack is manufactured by the **recycling** method.*

The recycling-based production process of the bag involves fully downgrading the old truck tarps, which would otherwise be thrown away as waste, into raw materials and then converting them into new backpacks.

At the end of the process, the truck tarps are totally destroyed. They are transformed into new, fashionable backpacks!

*-The backpack is manufactured by the **upcycling** method.*

The upcycling-based production process of the bag involves simply reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.

At the end of the process, the original form of the truck tarps is retained. They are just transformed into new, fashionable backpacks!

Imagine the backpack below is produced by your preferred (upcycled/recycled) manufacturing method.

Please indicate:

How much do you think this backpack is?

How much do you think this backpack is?

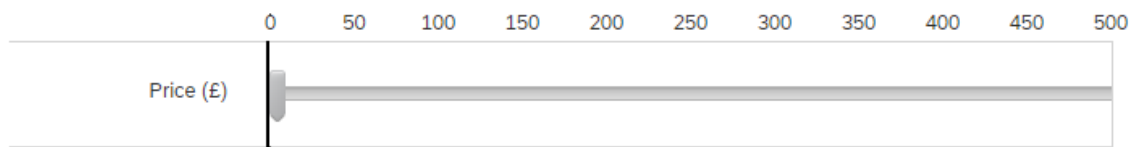


Figure 3 - Slider used to indicate the amount participants are willing to pay for the product within the Study



Figure 4 - Picture of the common backpack in upcycled, recycled and conventional conditions, utilized within Study 1, Study 2, Study 3, Pretest 2, Study 7

4.1.5 Study 4

Manufacturing Method Question - Multiple choice, only allowed for one answer

Choice randomization is used.

Imagine that you need to buy a jacket.

There are two different types of manufacturing methods of a jacket. Please read the descriptions of each manufacturing method below.

Keeping the price constant, which of the following manufacturing methods would you prefer for your jacket?

*-The jacket is manufactured by the **recycling** method.*

The recycling-based production process of the jacket involves fully downgrading the old sail cloths, which would otherwise be thrown away as waste, into raw materials and then converting them into new jackets.

At the end of the process, the sail cloths are totally destroyed. They are transformed into new, fashionable jackets!

*-The jacket is manufactured by the **upcycling** method.*

The upcycling-based production process of the bag involves simply reusing the old sail cloths, which would otherwise be thrown away as waste, and reshaping them into new jackets.

At the end of the process, the original form of the sail cloth is retained. They are just transformed into new, fashionable jackets!

Imagine the jacket below is produced by your preferred (upcycled/recycled) manufacturing method.

Please indicate:

How much are you willing to pay for this jacket?



Figure 5 - Slider used to indicate the amount participants are willing to pay for the product within the Study

4.1.6 Study 5

Upcycled product information with improvement cues (adapted from Park and John 2012)

A well-known bag producer has recently launched a new backpack which is manufactured by upcycling method.

Particularly, the upcycling based production process of the bag involves simply reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.

At the end of the upcycling process, the original form of the truck tarps is retained. They are just transformed into new, fashionable backpacks!

Plus, when you buy the backpack, you will receive a booklet with pictures of the production process in detail. You will be able to learn how the truck tarps are processed and improved to become a useful product.

With this upcycled backpack, you will learn how it is produced while supporting sustainability.

4.1.7 Study 6

Upcycled product information with signaling cues (adapted from Park and John 2012)

A well-known bag producer has recently launched a new backpack which is manufactured by upcycling method.

Particularly, the upcycling based production process of the bag involves simply reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.

At the end of the upcycling process, the original form of the truck tarps is retained. They are just transformed into new, fashionable backpacks!

Plus, when you buy the backpack, you will receive a booklet with pictures of people wearing the backpack on different occasions. You will be able to show your character and communicate who you really are.

With this upcycled backpack, you convey your sustainable persona and inspiration. Everyone will know your dedication to sustainable practices.

4.1.8 Study 7

Upcycled product information with different percentages (adapted from Scherer et al. 2018)

Manufacturing Method Question - Multiple choice, only allowed for one answer

Choice randomization is used.

Imagine that you need to buy a jacket.

There are two different types of manufacturing methods of a jacket. Please read the descriptions of each manufacturing method below.

Keeping the price constant, which of the following manufacturing methods would you prefer for your jacket?

-The jacket is manufactured by the upcycling method.

The upcycling-based production process of the bag involves simply reusing the old sail cloths, which would otherwise be thrown away as waste, and reshaping them into new jackets.

*At the end of the process, the new jacket is made of **80% upcycled material** and the original form of the sail cloth is retained. They are just transformed into new, fashionable jackets!*

-The jacket is manufactured by the upcycling method.

The upcycling-based production process of the bag involves simply reusing the old sail cloths, which would otherwise be thrown away as waste, and reshaping them into new jackets.

*At the end of the process, the new jacket is made of **50% upcycled material** and the original form of the sail cloth is retained. They are just transformed into new, fashionable jackets!*



Figure 6 - Picture of the jacket used in upcycled and recycled conditions in Study 4 and Study 7

4.2 Appendix – Essay 2

4.2.1 Study 1

Uniqueness level manipulation is adapted from Krause et al. 2023.

One-of-a-kind Uniqueness manipulation

A well-known backpack producer has recently launched a new backpack which is manufactured by the upcycling method.

The upcycling-based production process of the backpack involves reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.

Given the distinctiveness of each truck tarp, only 1 of the same backpack could be produced. You will be the one and only customer worldwide to have this specific backpack.

Few-of-a-kind Uniqueness manipulation

A well-known backpack producer has recently launched a new backpack which is manufactured by the upcycling method.

The upcycling-based production process of the backpack involves reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.

Given the limited availability of the identical truck tarps, 60 of the same backpack could only be produced. You will be one of the 60 customers worldwide to have this specific backpack.

Upcycled Product control (without any specific Uniqueness information)

A well-known backpack producer has recently launched a new backpack which is manufactured by the upcycling method.

The upcycling-based production process of the backpack involves reusing the old truck tarps, which would otherwise be thrown away as waste, and reshaping them into new backpacks.



Figure 7 - Picture of the backpack used in upcycled and recycled conditions in all studies within Essay 2

4.2.2 Study 3

The Consumers' Need for Uniqueness Scale (Tian and McKenzie 2001) 5-point Likert scale is used.

4.2.2.1 Creative Choice Counterconformity

1. I collect unusual products as a way of telling people I'm different.
2. I have sometimes purchased unusual products or brands as a way to create a more distinctive personal image.
3. I often look for one-of-a-kind products or brands so that I create a style that is all my own.
4. Often when buying merchandise, an important goal is to find something that communicates my uniqueness.
5. I often combine possessions in such a way that I create a personal image for myself that can't be duplicated.

6. I often try to find a more interesting version of run-of-the-mill products because I enjoy being original.
7. I actively seek to develop my personal uniqueness by buying special products or brands.
8. Having an eye for products that are interesting and unusual assists me in establishing a distinctive image.
9. The products and brands that I like best are the ones that express my individuality.
10. I often think of the things I buy and do in terms of how I can use them to shape a more unusual personal image.
11. I'm often on the lookout for new products or brands that will add to my personal uniqueness.

4.2.2.2 Avoidance of Similarity

1. When products or brands I like become extremely popular, I lose interest in them.
2. I avoid products or brands that have already been accepted and purchased by the average consumer.
3. When a product I own becomes popular among the general population, I begin using it less.
4. I often try to avoid products or brands that I know are bought by the general population.
5. As a rule, I dislike products or brands that are customarily purchased by everyone.
6. I give up wearing fashions I've purchased once they become popular among the general public.
7. The more commonplace a product or brand is among the general population, the less interested I am in buying it.
8. Products don't seem to hold much value for me when they are purchased regularly by everyone.
9. When a style of clothing I own becomes too commonplace, I usually quit wearing it.