

# UNIVERSITY OF TWENTE.

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## **From Greenwashing to Green authenticity:**

Overcoming Greenwashing Strategies in Sustainable Fashion Marketing on Instagram

Name student: Chiara Wiederstein

Student ID: 3307654

First Supervisor: Dr. Mirjam Galetzka

Second Supervisor: Dr. Annemarie Nanne

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## Abstract

**Purpose** – The purpose of this research was to explore how different elements of sustainable fashion marketing on social media contribute to creating authentic, coherent, and trustworthy posts. Specifically, the study examined the impact of green appeals (concrete vs. abstract) and benefit associations (self-oriented vs. other-oriented) on consumers' sustainable purchase intentions. Benefit associations play an essential role in this context because they shape how consumers relate to the message, either by focusing on personal gains (self-oriented) or broader environmental benefits (other-oriented). This study aimed to determine whether concrete green appeals, combined with the right benefit association, result in higher sustainable purchase intention, greater perceived authenticity, lower confusion and higher perceived trustworthiness. Additionally, the research investigated whether perceptions of authenticity, confusion, and trustworthiness mediate the relationship between green appeals and purchase intentions.

**Method** – By using a 2 x 2 between subjects' design, this study examined how different types of green advertising appeals and benefit associations in Instagram fashion posts influence sustainable purchase intention, perceived authenticity, green confusion, and perceived trustworthiness. Participants were exposed to one of four distinct sustainable denim posts on Instagram, which varied in the type of green appeal (concrete vs. abstract) and the orientation of the benefit slogans (self-oriented vs. other-oriented). A total of 164 participants completed the main questionnaire.

**Results** – The results revealed that concrete green appeals significantly increased sustainable purchase intentions, reduced green confusion, and enhanced perceived trustworthiness compared to abstract appeals. Green confusion and perceived trustworthiness significantly mediated the relationship between appeal type and purchase intention. Additionally, concrete green appeals paired with self-oriented benefits led to the highest levels of perceived authenticity, trustworthiness, and purchase intentions. In contrast, other-oriented benefits did not significantly enhance the effectiveness of abstract green appeals. These findings highlight the critical role of concrete green appeals and the specific impact of benefit associations in driving consumer behavior in green marketing.

*Keywords: sustainable fashion; greenwashing; authenticity; green appeals; benefit-associations; green consumer confusion; green trust; purchase intention*

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## 1 Introduction

“There is still, to date, a lack of efficiency in advertising and marketing sustainable fashion” (Guedes et al., 2020, p. 124). Despite the fashion industry's growing emphasis on sustainability, effectively communicating these efforts to consumers still remains a significant challenge. Fashion brands are often criticized for their environmental impact (Adigüzel, 2020) and have increasingly adopted green marketing to align with rising consumer demand for sustainable products. Green marketing, defined as “all-encompassing organizational activities facilitating exchanges that satisfy consumer desires with minimal negative impact on the natural environment” (Butt et al., 2017, p. 1), has become widespread among fashion companies (Chen, 2010). However, the mere adoption of green marketing strategies does not guarantee their effectiveness, as motivating consumers to make sustainable purchase decisions still remains complex.

One of the central challenges lies in the growing prevalence of greenwashing—where brands mislead consumers about the true environmental benefits of their products or practices. For instance, H&M's Conscious campaign uses visual and textual elements to project an image of eco-friendliness while hiding their unsustainable practices (see Appendix A). This deceptive practice leads to green confusion, where consumers struggle to differentiate genuinely sustainable products from those that merely employ green marketing tactics (Parguel et al., 2014). This confusion not only undermines consumer trust but also diminishes the overall impact of sustainability efforts across the industry. Therefore, it is crucial for brands to enhance the authenticity, clarity, and trustworthiness of their green marketing messages to effectively engage consumers and promote sustainable behaviors (Guedes et al., 2020; Shen et al., 2014).

The relevance of this research becomes evident when considering the current landscape of sustainable fashion marketing. With consumers being aware of greenwashing, it is essential to identify the most effective strategies for communicating sustainability in a way that resonates with consumers and encourages genuine sustainable purchasing behavior.

A key aspect of creating effective green marketing messages lies in the strategic use of benefit associations that align with consumers' values and beliefs. These associations can be either self-oriented (e.g., emphasizing personal benefits like enhanced style or comfort) or other-oriented (e.g., focusing on broader environmental impacts or the well-being of future generations). While previous research has explored the impact of these benefit associations, their findings have been mixed, suggesting that their effectiveness depends on the context and varies across different marketing scenarios (Jaeger & Weber, 2020; Visser et al., 2015; Yang et

al., 2015). This inconsistency highlights the need for a deeper understanding of how benefit associations influence consumer purchase intention and perceptions, particularly in the context of sustainable fashion marketing.

Additionally, the effectiveness of green marketing messages depends on the clarity and specificity of green appeals. Whether these appeals are concrete, providing detailed, verifiable information (e.g., “this product contains 35% natural materials and 15% less plastic”) or abstract, using vague and general terms (e.g., “environmentally friendly” or “clean”) plays a crucial role in shaping consumer perceptions of authenticity, confusion, and trustworthiness. Concrete appeals tend to enhance perceived authenticity and reduce green confusion, while abstract appeals can lead to skepticism and uncertainty (Yang et al., 2015). Moreover, the efficacy of green appeals can be influenced by matching the message specificity with the appropriate benefit association, leading to greater consumer engagement (Kyu Kim et al., 2021; Yang et al., 2015).

By examining how the interplay between benefit associations (self-oriented vs. other-oriented) and the specificity of green appeals (concrete vs. abstract) affects consumers’ perceptions, this research seeks to provide valuable insights that can guide fashion brands in crafting more effective and trustworthy green marketing messages. Therefore, this study addresses an important research gap by exploring the combined impact of benefit associations and green appeals on consumer purchase intentions and their perceptions of authenticity, green confusion and trustworthiness in the context of sustainable fashion. The findings will not only contribute to a more nuanced understanding of green marketing effectiveness but also offer practical guidance for brands seeking to navigate the challenges of sustainable communication in an increasingly skeptical marketplace.

Therefore, the following research question will be examined through an analysis of four fashion posts on Instagram, each featuring different combinations of captions and benefit associations:

RQ: *“What is the impact of incorporating different green appeals (concrete / abstract) and sustainable benefit associations (other-oriented / self-oriented) in sustainable fashion Instagram posts on consumers’ perceptions, specifically perceived authenticity, green confusion, and trustworthiness, and their sustainable purchase intentions?”*

## **2 Theoretical Framework**

This section reviews key findings, addresses inconsistencies, and highlights unexplored areas in the current research on sustainability within the fashion industry. It explores critical topics such as green marketing, greenwashing, and examines consumer behaviors, particularly focusing on sustainable purchase intentions, authenticity, green confusion, and trust. During the chapters, hypotheses are developed, and a conceptual model is created to guide the research.

### **2.1 Sustainability in the Fashion industry**

The fashion industry is known as one of the most polluted industries in the world, contributing to pollution through emissions, waste and water usage (Grazzini et al., 2021). This reality underscores the urgency of minimizing these impacts and transforming modern fashion consumption (Guedes et al., 2020; Kapoor et al., 2023). Brands like Benetton, Adidas, and C&A have faced criticism for unsustainable supply chain practices, highlighting the need for practical and sustainable solutions, especially within the fast fashion industry (Soni & Baldawa, 2023). The lack of standardized regulations for sustainability reporting opens the door for greenwashing, where companies falsely claim environmental friendliness (Soni & Baldawa, 2023). In sustainable fashion, this involves misleading consumers about a company's practices or product benefits (Szabo & Webster, 2021), often using nature-themed imagery and vague claims to create a false impression of sustainability (Milanesi et al., 2022; Parguel et al., 2014). Such tactics foster consumer skepticism and distrust, damaging brand reputation and reducing consumers purchase intentions (Delmas & Burbano, 2011; Newell et al., 2015). Consequently, there is an urgent need to counteract the negative effects of greenwashing through developing clear and authentic green marketing strategies that build trust and encourage sustainable purchasing behavior.

To overcome greenwashing, it is essential to develop clear and authentic green marketing strategies that build trust and promote sustainable purchasing behavior. Some fashion brands are already rising to the challenge through their integration of sustainable practices across their supply chains, as exemplified by Patagonia and Reformation (Soni & Baldawa, 2023). This shift is supported by growing consumer awareness, particularly among Generation Z, who prioritizes eco-friendly consumption and seeks detailed product information (Kim & Suh, 2022). While some fashion companies have begun implementing measures to protect the environment, the question of how consumers decide to purchase sustainable fashion products remains still unresolved (Grazzini et al., 2021). Therefore, emphasizing sustainability

in brand messaging is increasingly important for educating consumers and encouraging sustainable purchasing behavior (Kim & Suh, 2022).

Green marketing, which involves promoting products in ways that minimize environmental impacts, has become essential for fashion brands (Butt et al., 2017). It not only helps companies reach new markets and increase profits but also builds a positive brand image and customer loyalty (Chen, 2010; Jung et al., 2020). Social media is a powerful tool for sharing these sustainability efforts, as it allows brands to engage directly with consumers and receive immediate feedback through likes, shares, and comments (Nelson et al., 2019; Kwon & Lee, 2021). Explicitly, Instagram's visual nature makes it effective for delivering messages and influencing consumer behavior (Milanesi et al., 2022).

## **2.2 Determinants of Sustainable Consumer Behavior**

As the fashion industry increasingly embraces sustainability, understanding the factors that influence consumer behavior towards sustainable products becomes crucial. This chapter delves into the critical determinants of sustainable consumer behavior, focusing on key concepts such as sustainable purchase intention, perceived authenticity, green confusion, and perceived trustworthiness. These elements can give deeper insights into how consumers make purchasing decisions in the context of sustainable fashion and how brands can effectively communicate their sustainability efforts to foster trust and encourage responsible consumption. This understanding is essential for driving meaningful changes within the industry and ensuring that sustainable practices resonate with and are supported by consumers.

### **2.2.1 Sustainable Purchase Intention**

In the pursuit of a more sustainable and responsible fashion industry, the goal is to create practices that benefit both people and the planet without compromising the needs of future generations (Kashyap, 2023). Sustainable purchase intention, defined as the likelihood of a consumer to buy a product based on their current attitudes and perceptions, serves as a key indicator of future purchasing behavior (Kashyap, 2023; Wu & Chen, 2014). Thus, consumers are more inclined to support brands that prioritize eco-friendly practices, often willing to pay a premium for sustainably produced products (Kumar et al., 2021; Visser et al., 2015).

Additionally, green marketing plays a crucial role in shaping these purchase intentions. By effectively communicating the sustainable attributes of products—such as the use of recycled materials—brands can significantly enhance consumer satisfaction and boost consumers purchase intentions (Grazzini et al., 2021). Accordingly, sustainable product

features have been proven to positively influence consumers purchase decisions across various studies (Cervellon & Wernerfelt, 2012; Joshi & Rahman, 2015; Kumar et al., 2017; Steinhart et al., 2013).

Moreover, better knowledge about sustainability and eco-friendly products increases the likelihood of purchasing sustainable fashion products (Sinha et al., 2022). Social media platforms like Instagram enhance these efforts, allowing brands to directly engage with consumers and influence their perceptions through visually compelling and interactive content (Milanesi et al., 2022). By doing so, brands aim to meet the growing consumer demand for transparency and environmental responsibility, aligning their messaging with these evolving consumer expectations (Grazzini et al., 2021).

### **2.2.2 *Perceived Authenticity***

Authenticity is crucial in shaping consumers' perception of a brand's sincerity and truthfulness. It involves a brand staying true to its values and aligning its internal practices with its messaging (Ahmad et al., 2024). Authenticity is associated with genuineness, reality, and truthfulness (Molleda, 2010; Schallehn et al., 2014), and is best conveyed through concrete language and tangible evidence of a company's efforts, making the information more believable (Chiu et al., 2012). Brands can establish authenticity by incorporating genuine, prosocial information about their practices, such as details about their apparel production that emphasize minimizing environmental harm and offering solutions to environmental challenges (Chiu et al., 2012; Wang & Shen, 2017).

Social media plays a key role in communicating this authenticity, particularly in green marketing. Therefore, brands can enhance their perceived authenticity through highlighting their values, mission, and commitment to sustainability (Kong et al., 2021). Patagonia, for example, exemplifies authentic communication by focusing on its core mission of saving the planet and initiatives like "1% for the Planet" and "Worn Wear," which resonates strongly with consumers (Bulmer et al., 2024; Wang & Shen, 2017). Highlighting these brand values serve as significant predictor of perceived authenticity because consumers seek brands that align with their own values (Voorn, 2023). Thus, brand authenticity emerges as pivotal factor for sustainable brands to withstand in the competitive media landscape (Voorn, 2023).

### **2.2.3 *Green Confusion***

Consumer confusion, as defined by Turnbull et al. (2000), occurs when individuals struggle to accurately interpret various aspects of a product or service during the decision-making process. This confusion is particularly pronounced in sustainability messaging, which has become increasingly complex (Walsh & Mitchell, 2010). In this context, consumers experience confusion because they struggle to differentiate between genuinely sustainable products and those that merely use green marketing tactics without true environmental benefits (Parguel et al., 2014).

Therefore, green confusion often stems from false claims or conflicting information from different sources, leading consumers to seek out more trustworthy information to facilitate their decision-making process (Walsh & Mitchell, 2010). Consequently, it is essential for brands to provide clear and tangible evidence of their sustainability efforts, for reducing green confusion and enabling consumers to understand the true impact of their purchasing decision (Pittman et al., 2022).

### **2.2.4 *Perceived Trustworthiness***

Trust is crucial in green marketing as it directly influences consumer response and purchase intentions. A lack of trust in green marketing is exacerbated by consumers' perception that labeling a product as green is often just a marketing strategy, leading to widespread mistrust of green advertisements and claims (Chen & Chang, 2013; Lyon & Maxwell, 2011). This mistrust is rooted in the belief that brands prioritize their own interests over consumer welfare (Walsh & Mitchell, 2010). Additionally, the complexity and volume of green marketing claims can overwhelm consumers, further limiting their trust in the claims (Walsh & Mitchell, 2010). The prevalence of greenwashing exacerbates this issue, making consumers more skeptical of all environmental claims and less likely to trust or purchase from brands they suspect of misleading practices (Eng et al., 2021; Parguel et al., 2014). Therefore, establishing trust is essential for effective green marketing, as it helps to overcome consumer skepticism and encourages sustainable purchasing behavior.

Given the importance of trust in green marketing, the effectiveness of green advertising appeals becomes critical. How brands communicate their sustainability efforts, whether through concrete, specific claims or more abstract, generalized messaging, can significantly influence consumer perceptions and determine the success of their green marketing strategies.

### **2.3 Green Advertising Appeals**

In the context of sustainable fashion, it is not enough for companies to simply show their 'greenness' through images, furthermore they also need to provide detailed textual information about their product characteristics, employing various types of green appeals (Chen & Chang, 2013). To attract consumers' attention, marketers typically manipulate the specificity of the environmental claims in either concrete claims (e.g., "our new product contains 30% more recycled material than the previous version") or abstract claims (e.g., "our new product is better for the planet") (Kyu Kim et al., 2021). Literature shows that green advertising appeals play a crucial role in shaping consumer perceptions, as different types of appeals can significantly influence how consumers view and engage with sustainable products (Yang et al., 2015).

On the one hand, concrete green appeals, which provide specific and detailed information, are particularly effective in promoting sustainability (Yang et al., 2015). These appeals offer credible, tangible information that helps consumers connect with the brand's sustainability story, making the content more believable (Chiu et al., 2012). By using concrete appeals, fashion brands can differentiate themselves from greenwashing practices and demonstrate a genuine commitment to sustainability (Javed et al., 2020). Highlighting specific details about materials, production processes, or unique product features is especially effective for mainstream brands aiming to market new sustainable products transparently (Adigüzel, 2020).

On the other hand, abstract green appeals are characterized by their vagueness and lack of specific information about a brand's sustainable practices (Yang et al., 2015). These appeals often use ambiguous terms like "recyclable," "eco-friendly," or "preserve nature" without providing detailed explanations, leaving out specifics about materials used, production processes, or the actual environmental impact (Kyu Kim et al., 2021). This lack of clarity is problematic because companies engaged in greenwashing frequently rely on these vague formulations, which can mislead consumers and create confusion (Szabo & Webster, 2021). For example, the use of buzzwords like "organic" without further clarification can lead to the misconception that all products from a brand are ethically sourced (Karlsson & Ramasar, 2020). Therefore, such vague appeals contribute to consumer uncertainty and skepticism, which can undermine trust and comprehension, ultimately fostering perceptions of greenwashing (Schmuck et al., 2018).

### ***2.3.1 Influence of Green Advertising Appeals on Purchase intention***

Previous research has demonstrated that providing consumers with clear, quantifiable information significantly enhances their satisfaction and purchase intentions (Yang et al., 2015). Therefore, when brands clearly communicate a product's sustainable features, such as the use of recycled materials, it not only enhances consumer satisfaction but also significantly increases the likelihood of purchases (Grazzini et al., 2021). This clarity fosters greater consumer involvement, satisfaction, and trust in the brand's commitment to sustainability (Newell et al., 2015).

Concrete green appeals, which offer specific and detailed information, directly address this need for clarity, which is supported by findings of Sinha et al. (2022). Their research highlights revealing that better knowledge about sustainability and eco-friendly products increases the likelihood of purchasing sustainable fashion items (Sinha et al., 2022). Accordingly, brands using concrete appeals to provide detailed information about their products' sustainable features, not only enhance consumer understanding but also meet the growing demand for transparency. This alignment with consumer expectations leads to higher purchase intentions, as consumers are more likely to trust brands that provide specific, verifiable details about their environmental efforts (Grazzini et al., 2021).

In contrast, abstract green claims, which lack specific details, often leave consumers uncertain about the actual environmental impact of a product (Schmuck et al., 2018). This vagueness can create skepticism, undermining consumer trust and ultimately leading to lower purchase intentions (Chen & Chang, 2013). Parguel et al. (2014) suggest that when brands use abstract claims without offering concrete evidence, it can lead consumers to question the brand's true commitment to sustainability, ultimately making them less likely to engage in sustainable purchases. Thus, Hypothesis 1 posits that concrete formulated green appeals, providing clear and specific information about the brands sustainability efforts will lead to higher sustainable purchase intentions compared to abstract formulated green appeals.

*H1: Posts with concrete formulated green appeals will lead to higher sustainable purchase intentions than posts with abstract formulated green appeals.*

### ***2.3.2 Influence of Green advertising appeals on Perceived Authenticity***

Beyond the influence of green appeals on purchase intentions, the authenticity of these appeals plays a crucial role in shaping consumer behavior. Building on the insight that brand authenticity is a critical factor in motivating sustainable purchases (Pittman et al., 2022), the specificity of green advertising appeals significantly impacts how consumers perceive authenticity. Perez et al. (2020) emphasize that information specificity positively influences perceived message authenticity. Thus, brand messages that provide concrete and detailed information about their sustainability efforts are more likely to be viewed as authentic. When consumers perceive a brand's post as authentic and genuinely committed to sustainability, they are more inclined to trust the brand and its environmental claims (Kapoor et al., 2023). Specifically, concrete green claims help establish this authenticity by offering verifiable details that align with consumers' values, thereby increasing the likelihood of purchases (Parguel et al., 2011).

In contrast, abstract green appeals, which rely on vague and generalized statements, are often perceived as less authentic. The lack of specificity in these claims can lead to skepticism, as consumers may struggle to assess the credibility of the brand's sustainability efforts (Parguel et al., 2011; Schmuck et al., 2018). Moreover, when consumers perceive that a brand is using sustainability more as a marketing tactic rather than demonstrating a genuine commitment, it further undermines the perceived authenticity of the brand (Parguel et al., 2011). This perceived inauthenticity negatively impacts the brand's image and reduces consumers purchase intentions (Parguel et al., 2011).

Therefore, it is assumed that when brands transparently communicate their environmental efforts through concrete green appeals, consumers are more likely to perceive the post as authentic compared to abstract green appeals. This higher perceived authenticity of the post may enhance consumers' sustainable purchase intentions. Thus, Hypothesis 2 posits:

*H2a: Posts with concrete formulated green appeals will be perceived as more authentic than posts with abstract formulated green appeals.*

*H2b: Higher perceived authenticity will mediate the relationship between green appeals and consumers sustainable purchase intentions.*

### **2.3.3 Influence of Green advertising appeals on Green Confusion**

After considering the role of authenticity in influencing sustainable purchase intentions, it is also essential to examine how green advertising appeals impact consumer confusion. Concrete green appeals provide consumers with a clear, verifiable basis for comparison, making it easier to make informed decisions without confusion (Yang et al., 2015). In contrast, abstract green appeals, which involve broad and unspecific claims about a brand's environmental friendliness, are often vague and difficult for consumers to verify (Yang et al., 2015). This lack of specificity can result in consumers not receiving enough information to make informed decisions, leading to confusion about the brand's sustainability efforts. Such confusion can hinder consumers' ability to understand the environmental benefits of a product, ultimately preventing them from purchasing sustainable products (Chen & Chang, 2013; Walsh & Mitchell, 2010).

Therefore, Hypothesis 3 suggests that concrete green appeals, which provide transparent and specific information about a company's environmental practices and sustainability efforts, will be perceived as less confusing compared to abstract green appeals that lack detailed information. When consumers clearly understand the actual impact of their purchase decisions through transparent communication (Walsh & Mitchell, 2010), they may be more likely to feel confident and informed, increasing the likelihood of purchasing sustainable products.

*H3a: Posts with concrete formulated green appeals will be perceived as less confusing than posts with abstract formulated green appeals.*

*H3b: Lower green confusion will mediate the positive relationship between concrete formulated green appeals and sustainable purchase intention.*

### **2.3.4 Influence of Green advertising appeals on Perceived Trustworthiness**

As consumers become more aware of deceptive marketing tactics, they increasingly demand detailed and accurate information. Concrete green appeals, which provide verifiable and specific details, are perceived as more credible than abstract appeals (Kyu Kim et al., 2021; Jaeger & Weber, 2020). This transparency, through claims that highlight a product's environmental benefits with specific information, leads to more favorable attitudes, enhanced credibility, and better recall compared to nonspecific advertising claims (Kyu Kim et al., 2021). As a result, consumers perceiving these advertisements as transparent and credible, fostering

positive attitudes toward both the ad and the brand, increasing the likelihood of purchasing the brand's products (Newell et al., 2015).

Moreover, green messages that provide detailed and truthful information in a clear and specific manner make it easier for consumers to trust the company's commitment to eco-friendliness (Parguel et al., 2014; Yang et al., 2015). The transparency offered by concrete green appeals not only distinguishes genuine sustainable practices from deceptive ones but also enhances the brand's credibility, making consumers more likely to trust and purchase from the brand (Javed et al., 2020).

Conversely, abstract green appeals, which lack this level of accountability, may be perceived as less trustworthy. When consumers feel misled by inauthentic green claims, their purchase intention drops significantly (Kahraman & Kazancoglu, 2019; Pittman et al., 2022; Zhang et al., 2017). Therefore, the vagueness of abstract green appeals can lead to mistrust or concerns about greenwashing, further undermining confidence in the brand's true environmental commitment.

Thus, Hypothesis 4 posits that consumers are more likely to trust concrete green appeals over abstract green appeals due to the credibility they convey. This trust fosters positive attitudes toward the brand's environmental efforts, giving consumers confidence in the positive impact of their purchasing decisions (Eng et al., 2021), and increasing the likelihood of purchasing sustainable products.

*H4a: Posts with concrete formulated green appeals will be perceived as more trustworthy than posts with abstract formulated green appeals.*

*H4b: Higher perceived trustworthiness will mediate the relationship between green appeals and consumers sustainable purchase intentions.*

## **2.4 Green Advertising Appeals combined with Sustainable Benefit associations**

The impact of concrete and abstract green appeals is dependent on the type of benefit association they are paired with, making it a crucial factor in determining their overall effectiveness (Yang et al., 2015). Presenting consumer benefits is a widely used and effective strategy for promoting environmentally friendly products and is particularly effective when the message specificity aligns with the appropriate benefit type (Kyu Kim et al., 2021). Thus, the alignment between the type of green appeal and the benefit association plays a key role in shaping consumer perceptions and enhancing the effectiveness of green advertising in driving

sustainable consumption (Kyu Kim et al., 2021). Interestingly, previous literature shows evidence in the effectiveness of both types of benefits association as a successful message strategy.

Self-oriented benefit associations emphasize personal advantages, such as cost savings or convenience, which naturally resonate with consumers who are inclined to prioritize their own interests (Yang et al., 2015). These benefits align with consumers' individual needs and preferences, making marketing messages that highlight self-benefits particularly effective. For example, Visser et al. (2015) demonstrated that focusing on personal benefits, like style in a shoe advertisement, can slightly outperform messages that emphasize broader environmental factors, such as the use of eco-friendly materials. By addressing consumers' desire for self-enhancement, where individuals are motivated to view themselves positively and present themselves favorably to others, self-benefit associations in advertisements are more likely to engage consumers and drive their purchasing decisions (Kyu Kim et al., 2021).

Combining self-benefits with concrete green claims further enhances the effectiveness of green advertising. When a green product offers tangible benefits that directly serve the consumer's personal interests, and these are communicated through detailed, transparent claims, consumers are more likely to perceive the message as trustworthy and aligned with their personal goals (Kyu Kim et al., 2021).

According to the Construal Level Theory of Psychological Distance (CLT), sustainability is often seen as an abstract and distant concept. However, when sustainability is presented through concrete messages that highlight immediate and relevant self-benefits, it becomes more psychologically close, enhancing the relevance of the message for the consumer (Ahmad et al., 2024; Jaeger & Weber, 2020). This relevance is crucial because individuals tend to use a more concrete mindset when evaluating decisions that are psychologically close to them (Reczek et al., 2018). When consumers perceive a product as personally relevant and beneficial, they are more likely to think concretely and engage with the message. Therefore, concrete green claims combined with self-benefit associations are effective in fostering consumer engagement (Kyu Kim et al., 2021). These appeals are often better tailored to match consumers' self-concept, particularly in contexts like fashion, where style and aesthetics are highly valued (Adiguel, 2020).

As a result, consumers are more likely to purchase green products when the self-benefits are clear, specific, and directly aligned with their personal goals or needs. This alignment between personal benefits and message specificity significantly enhances the persuasive power

of the advertisement, making consumers more likely to act on the green product's promise (Yang et al., 2015).

Given these insights, it is anticipated that concrete green appeals, which provide clear, specific, and transparent information about a brand's sustainable practices, when combined with self-oriented benefit associations, will enhance consumers' perceptions and sustainable purchase intentions more effectively than concrete appeals combined with other-oriented associations. Therefore, Hypothesis 5 posits:

*H5: The effectiveness of concrete green appeals will be enhanced through self-oriented benefit associations, leading to a) more perceived authenticity b) less green confusion c) more perceived trustworthiness and higher sustainable purchase intentions compared to other-oriented benefit associations.*

Conversely, other-oriented benefit associations focus on the good of the environment, with consumers giving up personal profit in their sustainable purchase decisions (Griskevicius et al., 2010; Kapoor et al., 2023). Other-oriented benefits focus on benefits for the community or society as a whole (Adiguel, 2020). Peattie and Crane (2005) highlight that offering future benefits for the entire generation of consumers is more effective in enhancing consumers' green purchase intentions compared to emphasizing individual benefits. Thus, consumers tend to prioritize environmental benefits over personal gains while purchasing green products (Yang et al., 2015). This suggests that consumers are even willing to sacrifice individual product preference for the greater good of society (Yang et al., 2015).

As highlighted before, abstract claims often depict sustainability in a distant and more broad manner. This aligns with the concept of other-oriented benefit association, because consumers perceiving sustainability as psychologically distant are more likely to respond positively to messages that emphasize the broader societal or environmental benefits (Jaeger & Weber, 2020). Aligning with this, research has demonstrated that people think in a more abstract way when evaluating and making decision about psychologically distant targets (Adiguel, 2020). Other-oriented benefits, such as benefits for the environment or future generations, increase this psychological distance between the consumers and the advertised green product, leading to more abstract thinking (Kyu Kim et al., 2021).

According to construal level theory, abstract messages have the potential to be more persuasive than concrete appeals if there is a good match between the content and the distance (Kyu Kim et al., 2021; Yang et al., 2015). Thus, by combining an abstract claim with other-

benefit associations, the message may be perceived as more authentic, as consumers are more likely to resonate with messages that demonstrate concern for the greater good compared to self-serving interests (Kapoor et al., 2023).

Moreover, Jaeger & Weber (2020) found that other-oriented benefit associations are often perceived as the most credible and lead to the highest willingness to purchase the advertised product. This is because consumers may feel a greater sense of responsibility and fulfillment when they believe their actions contribute to the common good. Claims that emphasize benefits for others and the society can therefore increase perceived authenticity and purchase intentions by conveying a genuine concern that extends beyond individual interests (Kapoor et al., 2023). In this context, sustainable consumption that benefits future generations can be more effective in motivating purchase intentions than self-focused benefits (Balaji et al., 2021).

In contrast, when self-oriented benefit associations are paired with abstract claims that already lack concrete details, they may be perceived less positively. Aligning with this, Yang et al. (2015) found that abstract appeals lead to significantly lower purchase intentions when the attributes of green products are associated with self-benefits. The lack of specificity in these appeals makes it harder for consumers to connect with the product on a personal level, reducing the effectiveness of the message.

Therefore, highlighting abstract green appeals with other-oriented benefit association in a sustainable fashion post may enhance perceived authenticity, foster a sense of responsibility and drive sustainable purchasing behavior (Jaeger & Weber, 2020). Thus Hypothesis 6 suggests that other-oriented benefit association, when paired with abstract claims can enhance the effectiveness of the message in terms of consumer perceptions and purchase intentions, particularly compared to self-oriented benefit associations.

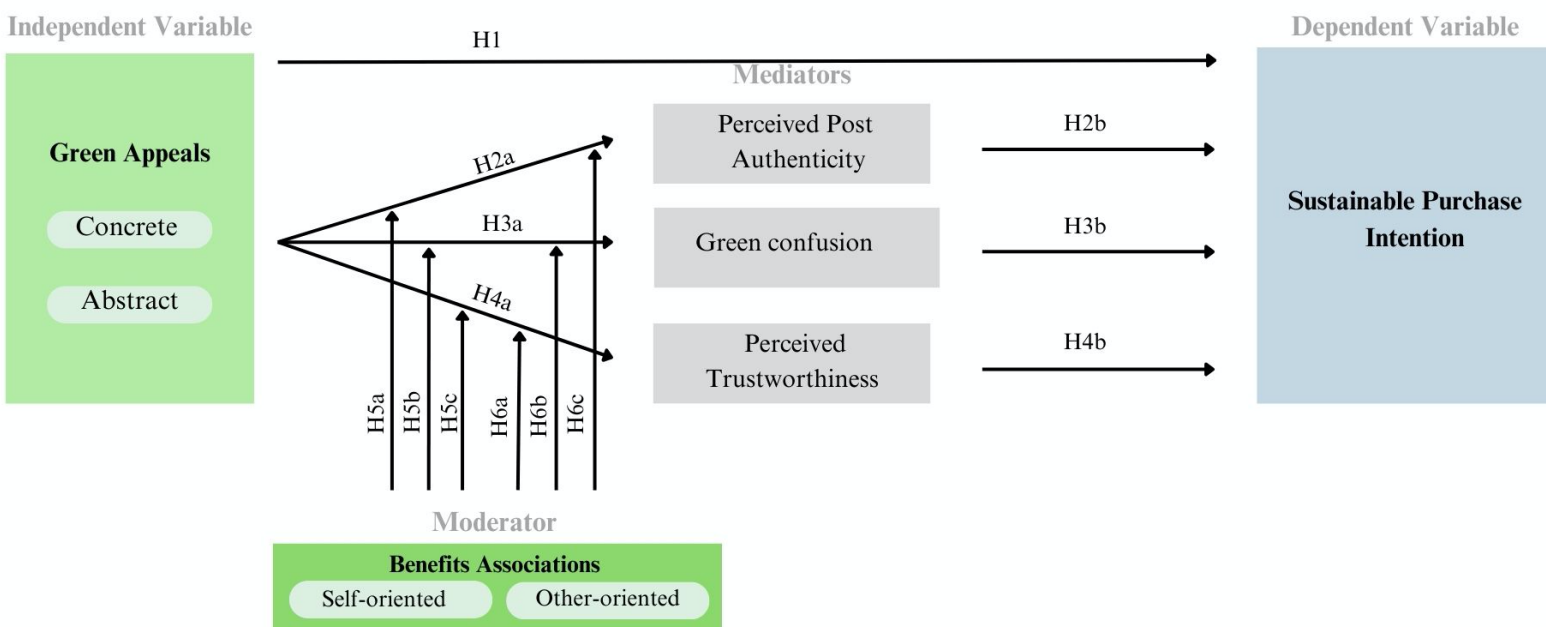
*H6: The effectiveness of abstract green appeals will be enhanced through other-oriented benefit associations, leading to a) more perceived authenticity b) less green confusion c) more perceived trustworthiness and higher sustainable purchase intentions compared to self-oriented benefit associations.*

## 2.5 Conceptual Framework and Hypotheses Overview

The primary objective of this study is to explore how green appeals influence consumers' sustainable purchase intentions, with a focus on the moderating effects of self-oriented versus other-oriented benefit associations. Additionally, this research examines the mediating roles of perceived authenticity, green confusion, and perceived trustworthiness in shaping these relationships. The conceptual framework of this study is presented in Figure 1.

**Figure 1**

*Hypothesized conceptual Model*



**Table 1***Overview of Hypotheses*

<b>Overview of Hypotheses</b>	
<b>H1</b>	<i>Posts with concrete formulated green appeals will lead to higher sustainable purchase intentions than posts with abstract formulated green appeals.</i>
<b>H2a</b>	<i>Posts with concrete formulated green appeals will be perceived as more authentic than posts with abstract formulated green appeals.</i>
<b>H2b</b>	<i>Higher perceived authenticity will mediate the relationship between green appeals and consumers sustainable purchase intentions.</i>
<b>H3a</b>	<i>Posts with concrete formulated green appeals will be perceived as less confusing than posts with abstract formulated green appeals.</i>
<b>H3b</b>	<i>Lower green confusion will mediate the relationship between green appeals and consumers sustainable purchase intention.</i>
<b>H4a</b>	<i>Posts with concrete formulated green appeals will be perceived as more trustworthy than posts with abstract formulated green appeals.</i>
<b>H4b</b>	<i>Higher perceived trustworthiness will mediate the relationship between green appeals and consumers sustainable purchase intentions.</i>
<b>H5</b>	<i>The effectiveness of concrete green appeals will be enhanced through self-oriented benefit associations, leading to a) more perceived authenticity b) less green confusion c) more perceived trustworthiness and higher sustainable purchase intentions compared to other-oriented benefit associations.</i>
<b>H6</b>	<i>The effectiveness of abstract green appeals will be enhanced through other-oriented benefit associations, leading to a) more perceived authenticity b) less green confusion c) more perceived trustworthiness and higher sustainable purchase intentions compared to self-oriented benefit associations.</i>

### 3 Method

#### 3.1 Research Design

This study seeks to understand the influence of concrete green appeals compared to abstract green appeals combined with either other-oriented or self-oriented benefit associations on consumers perceived authenticity, green confusion, perceived trustworthiness and their sustainable purchase intention. The experiment employs a 2 (concrete vs abstract green appeals) x 2 (other-oriented vs self-oriented benefit associations) between subjects' design with perceived authenticity, green confusion and perceived trustworthiness as mediating variables and sustainable purchase intention as dependent variable. A visual representation of this research model is presented in Figure 1.

The different conditions represent the various scenarios of Instagram slogans and captions in a real-world Instagram fashion post. The conditions consider either other-oriented or self-oriented slogans on the post itself, combined with captions, which include either concrete information with detailed and precise information or abstract information, which are more vaguely formulated. A central aspect of this exploration will be to understand consumers perceptions in term of perceived authenticity, confusion, and trust in the different elements to enhance their sustainable purchase intention. As presented in Table 2, the study contains four conditions, combining green advertising appeals with benefit associations.

Furthermore, sustainable denim was chosen as the product of interest because the modern denim industry constitutes a significant percentage of the textile industry (Eroglu, 2023) and its producing process has a negative impact on the environment (Periyasamy & Periyasami, 2023). The production takes a high amount of water just to grow the cotton and usage for the dying fabric that goes into a single pair of jeans (Miller, 2019). Moreover, the denim production involves several chemical washes to make them softer or more wearable (Miller, 2019). Consequently, growing concern over environmental impacts of textiles in the denim industry, resulting in pressure for denim- companies to employ more sustainable production methods (Miller, 2019).

With focusing on sustainability and long-lasting quality through the usage of eco-friendly materials, like organic or recycled cotton, the environmental effect of the denim production can be reduced and helps to create more environmentally responsible denim products that are healthier for both people and the planet (Eroglu, 2023). The aim of promoting recycled denim is therefore to prevent damages to the environment and to protect natural resources (Eroglu, 2023).

**Table 2***Overview of Stimuli conditions*

<b>Benefit Association</b>	<b>Green Appeals</b>	
	Concrete	Abstract
<i>Self – oriented</i>	Concrete / Self	Abstract / Self
<i>Other – oriented</i>	Concrete / Other	Abstract / Other

### 3.2 Pre-Test

A pre-test was conducted to evaluate the key elements such as sustainability images, slogans, and captions for their efficacy, attractiveness, and clarity. A focus group of five participants from Germany, the Netherlands, and Romania, aged 20 to 24, was assembled to create and refine four different sustainable Instagram posts. These posts consist of slogans on images combined with various captions.

Using an interactive Miro board as the discussion platform, the group provided spontaneous feedback, suggestions, and creative ideas during an offline, face-to-face session. The diverse backgrounds of the participants in terms of their attitudes toward sustainability in fashion provided valuable insights. This collaborative environment facilitated the creation of valid stimuli for the four experimental conditions.

The Miro board allowed participants to categorize images, slogans, and captions through drag-and-drop functionality, enabling real-time collaboration. Participants could also offer suggestions via sticky notes or direct feedback with the researcher. This focus group method proved effective in fostering deep discussions and generating new ideas, ensuring that the final materials aligned well with the research objectives.

#### 3.2.1 Pre-Test Procedure

To explore participants' perceptions of sustainability in the context of sustainable denim, they were presented with a variety of sustainable denim images, capturing diverse aspects. Hereby, the group engaged in a card-sorting activity to rate the perceived level of sustainability, ranging from high to low levels. Observing how participants ranked the images and express their own associations with sustainability, provided essential insights for the visual representation for the sustainable denim post. Furthermore, participants were asked which

specific elements in the post were perceived as most appealing to ensure it captures consumers' attention.

In the second step, different other-oriented benefit associations were presented in form of slogans to test which slogan matches the criteria of the condition the best. In this scenario, participants were encouraged to imagine themselves scrolling through their Instagram "ForYou" page, looking for a new sustainable jeans pair and recognizing a new brand promoting sustainable denim wear. This scenario may give participants the option to assess their sustainability perceptions, and the effectiveness and clarity of the different slogans, which enables evaluation of individual feedback and validation that the condition are understood as intended.

To delve deeper into the participants' perceptions of benefit associations, different other-oriented benefit slogans were presented. These included "*Sustainable Denim for Reducing Ocean waste*", "*Building a better, more sustainable future*", "*Greener fashion, Greener planet*" and "*Sustainable denim for Future Generations*", urging these slogans to categorize them based on their representation of other-oriented benefit associations and being clear claims. Through this method it was possible, to see different insights of participants' preferences, related to authenticity, clarity, and trustworthiness of the claims.

For the next step of the pre-test procedure, the participants were presented to two different concrete formulated and two different abstract formulated Instagram post captions. In this step, the focus group needed to choose which caption is accurate and fluently to read and represents the appropriate condition criteria. In terms of the concrete condition, it was essential that the statements are clear and including precise and truthful information that can be independently verified. Conversely, for the abstract condition, it was relevant that the claims are more vaguely and unspecific formulated, using ambiguous wording. Combining the more favorable caption with the chosen slogan of the previous step over drag and drop, let the participants create a simplified full Instagram post example.

Afterwards the same procedure was conducted with self-oriented benefit slogans. Therefore, participants had to decide in-between "*Wear recycled Denim – Enjoy longer lasting Garments*", "*Buy better wear longer*", "*Timeless style – Durability you can trust*", "*Eco-friendly fashion – Look good, do good*", repeating drag and drop these slogans based on their representativeness of the criteria and clarification. Afterwards, the participants had to decide again between two different concrete formulated and two different abstract formulated Instagram captions, for creating simplified full Instagram post examples, which represent the conditions.

This pre-testing method resulted in overall positive attitudes of the research as it taps into participants' preferences and expectations. Using this strategy helped to explore the perceptions of participants presented to different sustainability pictures, benefit-oriented slogans, and different concrete or abstract framed captions, to ensure clarity, relevance, and efficiency of the materials. This method was helpful to effectively communicate the intended concepts. Furthermore, ensuring that the manipulations meet the criteria condition based on real-world Instagram post examples, makes the research more engaging and reliable, for optimizing the final research stimuli. A procedure for the pre-test can be found in Appendix B.

### **3.2.2 Pre-test Results**

In the first step, it became clear that each participant had distinct expectations of what constitutes sustainability. For example, one participant mentioned that “sustainability, to me, means a cheap, simply produced product with no need for extensive travel.” Overall, the group associated sustainability with simplicity and the use of natural resources. However, they also noted that too many plants and green colors in a post could be perceived as greenwashing. As a result, the focus was shifted toward simplicity, aligning with participants' perceptions of authentic sustainability.

Another important observation was that participants were more likely to consider purchasing sustainable jeans if they could see how the jeans fit on a real person. This visual representation was deemed more persuasive than a simple product image, as it helped potential buyers envision the jeans on their own bodies. This aligns with the research goal of fostering authenticity in the posts.

When discussing benefit-association slogans, the group preferred slogans that were clear, catchy, and marketable. For example, they liked “*Greener Fashion, Greener Planet*” and “*Sustainable Denim for Future Generations*”, ultimately combining them into the slogan “*Greener Fashion, Greener Planet for Future Generations*” for the other-oriented benefit condition.

Regarding green appeals in the Instagram captions, participants favored concrete claims that provided clear, specific, and transparent information, which could be independently verified. They emphasized that captions should be “easy to read,” as people on social media generally prefer concise content. In contrast, abstract claims were seen as less transparent and more broadly formulated.

For self-benefit associations, participants preferred slogans that were self-focused and clearly stated. For instance, they perceive the slogan *“Buy Better, Wear Longer”* as problematic, because it implied a higher cost and lacked trust in the longevity of recycled materials. They also felt that *“Timeless Style, Durability You Can Trust”* did not strongly connect with sustainable denim. Instead, the group agreed that *“Look Good, Do Good”* was the most effective and suitable slogan for the self-benefit condition. Additionally, words like *“stylish”* and positively framed phrases such as *“Step into a Sustainable Future”* were perceived as more authentic and aligned with self-oriented benefits.

### 3.3 Design Stimuli

Randomly assigned, each participant was exposed to one of the four scenarios, with *kasidenim* as the fictitious brand’s name. This fictional brand name was created, to prevent that participants are biased because of having a specific attitude towards an existing brand name. Respondents were instructed to imagine themselves scrolling through their Instagram *“For You”* page, looking for a new sustainable jeans pair, aligning with the research context (see Figure 2).

To provide participants with a realistic and valid experience, an Instagram post, created from a sustainable denim brand in the US ([everlane.com](http://everlane.com)) was used. This post shows the back of a women wearing a full denim outfit, with some nature elements in the background. This picture was used because it aligns with the sustainability perceptions of the participants in the pre-test, having a tendency of simplicity and natural resources. Therefore, this picture reflects a sustainable denim collection through a simple jeans outfit with some nature elements in the background (see Figure 2).

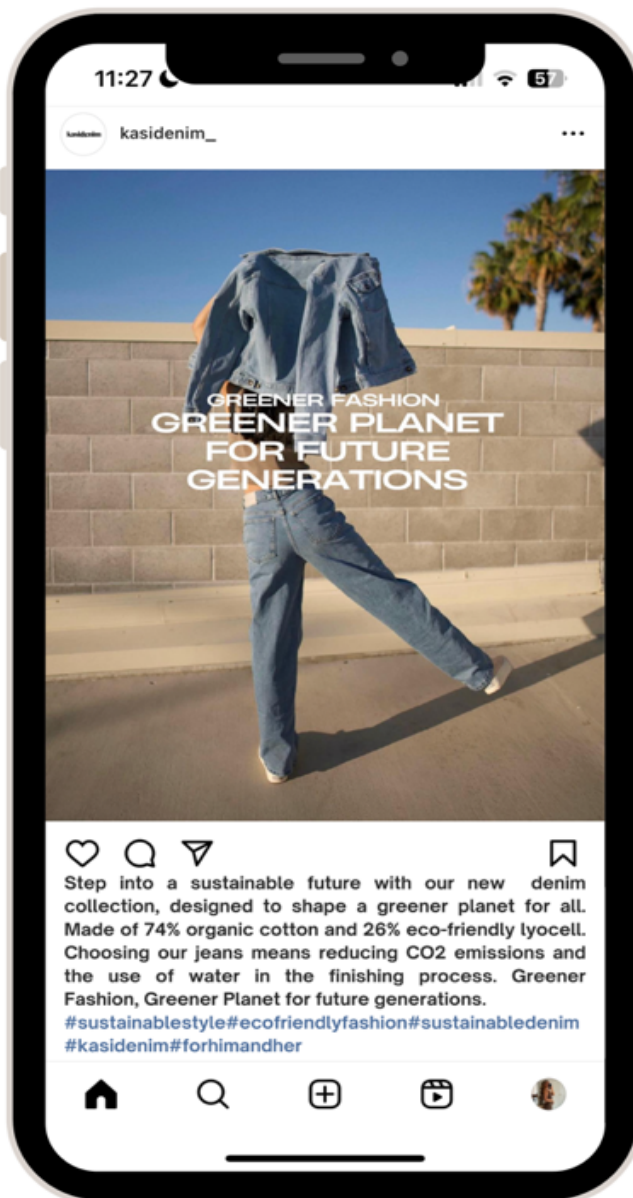
Using the fictitious denim brand *kasidenim*, the post was featuring an image that included a slogan highlighting either benefits focused on others (*‘Greener fashion, greener planet for Future generations’*) or benefits focused on the self (*‘Elevate your style, elevate yourself, Sustainable Denim for a better You’*). The captions contain of either more detailed concrete information, consisting of information about the percentage of sustainable materials used in the jeans production and information about reducing CO2 emissions and water usage during the production process. The abstract caption used vague wording and did not provide transparent information, using formulations like *‘support a brighter future. Look great while making a positive impact.’*

The captions provided more clearly formulated information, with clear, specific and transparent information for the concrete condition or vaguely formulated information in the

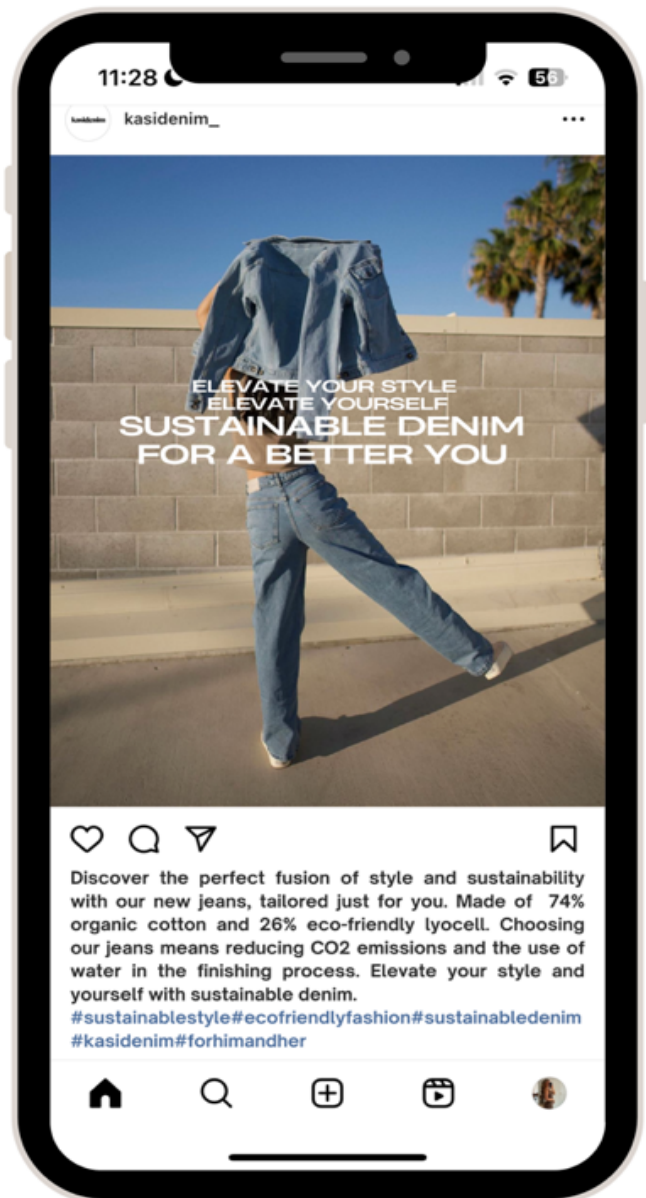
caption for the abstract condition (see Figure 2). Such re-created Instagram posts were related to real-world examples in sustainable denim wear, ensuring that the experiment represents an authentic and valid example.

**Figure 2**

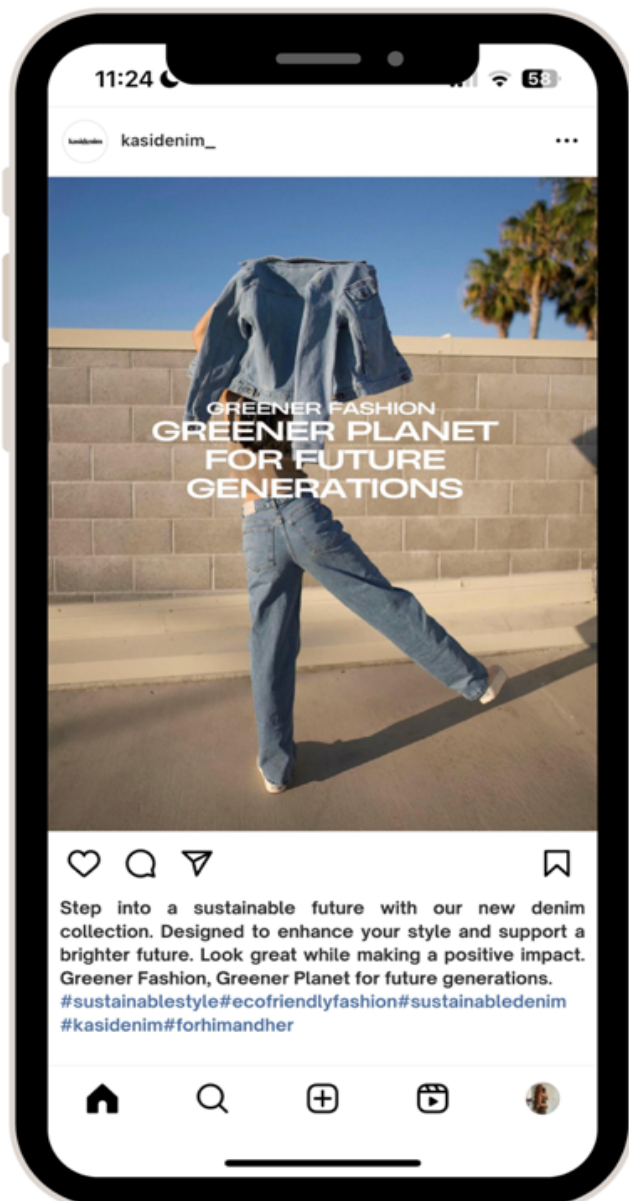
*Final Design Stimuli*



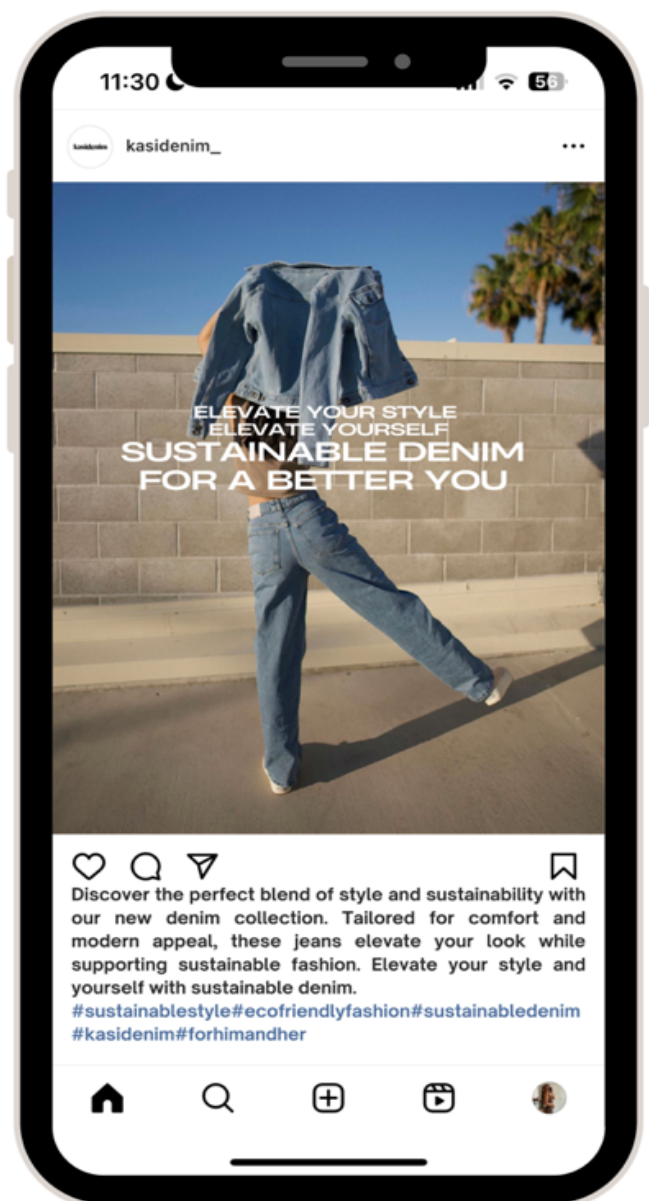
*a) concrete green appeal / other oriented benefit association*



*b) concrete appeal / self-oriented benefit association*



*c) abstract green appeal / other-oriented benefit association*



*d) abstract green appeal / self-oriented benefit association*

### 3.4 Experimental Procedure

Ethical approval for this research study was granted by the Ethics Committee at the University of Twente (Request nr. 241051). The primary data collection method used in this study was an online questionnaire, using the platform Qualtrics. This questionnaire explored consumers' perceptions regarding authenticity, confusion and trust and their sustainable purchase intentions after seeing an Instagram post from the fictional brand *kasidenim*. Before starting with the data collection, participants read a short introduction text, informing them about the research topic and the study procedure. Afterwards they were asked to provide

consent to participate in the study. If they disagreed with the experiment or the data management, they were appointed to the survey's conclusion. If agreed upon, they continued with the following survey:

First, participants answered demographic questions, including age, gender, nationality, and the highest level of education completed. Following this, they were introduced to the study's condition through a brief scenario text. Participants were then exposed to one of the four fictional Instagram posts on a simulated phone screen. After viewing the post, they were asked to evaluate it by responding to questions regarding their perceptions of the post's authenticity, their level of confusion about the sustainability claims, their trust in the provided information, and their intention to purchase the sustainable jeans from *kasidenim*.

Lastly, a manipulation check was conducted with questions designed to ensure that participants accurately identified and understood the specific scenario presented in the Instagram post. The survey concluded with a warm closing statement, thanking participants for their involvement and providing a brief debriefing that explained the research's purpose and clarified that the Instagram post was fictional. On average, participants took 5 to 10 minutes to complete the survey.

### **3.4.1 Sampling Procedure**

To reach a high number of participants, the survey was spread via the researcher's Instagram, WhatsApp and shared with the BMS Lab of University of Twente (Sona). That ensured that the survey reaches the research population, who needs to understand English and be older than 18 years old. As it was believed that this sampling technique would reach a wide variety of nationalities, the questionnaire was in English. This research population was chosen to ensure that participants understand the provided information in the Instagram caption and can buy their sustainable clothing alone.

### **3.4.2 Participants**

The survey was conducted between the 21<sup>st</sup> of June 2024 and the 3<sup>rd</sup> of July 2024. Individuals took voluntary part in the online experiment and were randomly assigned to one of the four conditions. In total there were 164 clicks of the survey link. Only completed surveys from participants who successfully passed the manipulation checks were considered valid, resulting in a final sample of 119 participants ( $N = 119$ ). The distribution across the four

conditions was balanced, with approximately 30 participants in each group. The demographics for this cleaned data sample over the 4 different conditions groups are presented below:

**Table 3**

*Demographics of Age, Gender, Nationality and Educational Level over 4 different groups*

		Benefit Association				
		Other-oriented (N = 58)		Self-oriented (N = 61)		
Appeal type						
Concrete (N = 56 )	N=28	Age (M)	26.07	N=28	Age (M)	25.14
	Gender	Male	17	Male		16
		Female	11	Female		12
	Nationality	Dutch	13	Dutch		6
		German	14	German		16
		Other	1	Other		6
	Educational Level	High School Graduate	10	High School Graduate		10
		Apprenticeship	1	Apprenticeship		4
		Bachelor's degree	13	Bachelor's degree		10
		Master's degree	4	Master's degree		4
		Others	0	Others		0
Abstract (N = 63)	N = 30	Age (M)	26.63	N=33	Age (M)	25.85
	Gender	Male	16	Male		16
		Female	14	Female		17
	Nationality	Dutch	7	Dutch		8
		German	15	German		20
		Other	8	Other		5
	Educational Level	High School Graduate	8	High School Graduate		14
		Apprenticeship	0	Apprenticeship		0
		Bachelor's degree	14	Bachelor's degree		14
		Master's degree	7	Master's degree		4
		Others	1	Others		1

*Note. Representing the 2x2 Factorial Design between subjects, the four condition*

To check if the participants were equally distributed over the four different experimental conditions, a chi-square test of independence was carried out for the demographics. There was no statically significant difference in the distribution of gender across the four experimental conditions:  $\chi^2 (3, N= 119) = 1.013, p = .798$ . Additionally, an ANOVA showed no significant difference in the age distribution  $F(3, 119) = .142, p = .935$ . This indicated that there was no significant relationship between the age of respondent across the conditions. In term of their nationality, a chi-square test of independence was performed to test for significant differences:  $\chi^2 (6, N= 119) = 9.669, p = .139$ . Accordingly, there was no obvious association between the respondents' nationality and the provided responses. Finally, to test if the educational level was equally distributed over the conditions, the results indicated that there was no significant association between theses variables:  $\chi^2 (12, N = 119) = 14.291, p = .282$ . Overall, these results suggest that there were no significant demographic differences among participants across the four experimental conditions.

### 3.5 Measures

This research employed a 5-point Likert scale (ranging from 'strongly disagree (1)' to 'strongly agree' (5)) to assess participants' responses across various constructs. The specific items within the scale were adapted to reflect on the fictional sustainable denim brand *kasidenim* and all provided information in the one-time-exposure Instagram post.

#### 3.5.1 Sustainable Purchase Intention (Dependent Variable)

Sustainable purchase intention was measured through items derived from a scale from Spears & Singh (2004) and Lavelle et al. (2015). This section aimed to capture their actual behavioral tendencies towards the presented sustainable jeans after considering the perceptions formed throughout the survey. The final scale consisted of these items "*I would like to buy the jeans from kasidenim in the future*" and "*I would be willing to pay a little more for the jeans from kasidenim*". Measuring this item in addition to the likelihood of purchasing the product is essential because it provides insights into the perceived value of sustainability. This measure helps to assess whether consumers recognize and appreciate the added value of sustainable products, indicating a stronger commitment to sustainable practices. It further highlights if consumers are willing to invest more in sustainability, thereby enhancing the predictive validity of purchase intentions in real-world scenarios. The Cronbach's Alpha reliability of the scale was .679 (n=2).

### **3.5.2 Perceived authenticity (Mediating Variable)**

To measure participants' perceptions of the post's authenticity using a scale adapted from Perez et al. (2020), the items aimed to identify participants' belief in the truthfulness and transparency of the provided information in the post. These items included: *"I believe the information in the post from kasidenim is authentic"*, *"I believe the information in the post from kasidenim is truthful"*, *"I believe the information in the post from kasidenim is genuine"*, *"I believe that kasidenim is transparent about its sustainability practices"*. The reliability of the scale was Cronbach's Alpha = .866 (n=4).

### **3.5.3 Green confusion (Mediating Variable)**

To measure consumers' perceived level of green confusion after reading the information in the post, the scales of Walsh et al. (2007) and Özkan & Tolon (2015) were combined and their measurement included four items: *"It is difficult to recognize the differences between the jeans from kasidenim and other sustainable jeans brands with respect to environmental features"*, *"The post from kasidenim has so much information that I am confused about its environmental features"*, *"When purchasing jeans from kasidenim, I rarely feel sufficiently informed with respect to environmental features"*, *"When purchasing jeans from kasidenim, I feel uncertain about its environmental features"*. The reliability of the scale was very low, having a Cronbach's alpha of .502. Based on this low Cronbach's alpha, it was realized that two dimensions of confusion were asked, including information overload and overall confusion. Therefore, it was decided to select the main item for measuring green confusion *"When purchasing jeans from kasidenim, I feel uncertain about its environmental features"*. This item was selected because it directly addresses the core aspect of green confusion and simplifies the measurement by targeting the most relevant dimension.

### **3.5.4 Perceived Trustworthiness (Mediating Variable)**

Green trust was assessed through items from the scale from Obermiller & Spangenberg, (1998) and Chuah et al. (2020) including *"The post from kasidenim is a reliable source of information about the quality and environmental performance of sustainable jeans"*, *"I believe that kasidenim's environmental performance is generally dependable"*, *"I believe that kasidenim's environmental claims are generally trustworthy"*, *"I am concerned that kasidenim is only pretending its green image"* and *"Kasidenim keeps promises and commitments for environmental protection"*. The reliability of the items in the scale was .767 (n=5).

### 3.5.5 Manipulation Check

The Manipulation check was crucial for confirming the effectiveness of the experimental manipulation and ensured that participants identified the manipulations, aligning with the study's validity. This step was essential for identifying any issues with the study design or participants compliance. This check at the end of the survey verifies that participants understood and responded to the manipulation as intended, helping to attribute any observed effects accurately to the manipulation. To prevent that the participants were biased before answering the main questionnaire, it was decided to ask the manipulation check at the end of the survey. Based on the research aim, the questions asked in the manipulation check were oriented by the manipulation check questions of Yang et al. (2015): Firstly, asking if *"The slogan in the post you saw, primarily focused on benefits associated with"*, including answer options *"Individual Self"*, *"Others"* or *"Do not recall"*. Secondly, the manipulation check for the information was the following: *"How would you describe the information provided in the caption?"*, including answering options *"general and vague"* or *"specific and detailed"* or *"I do not recall"*.

### 3.6 Data Analysis Plan

The first step in the Data Analysis included Data cleaning and screening. Thus, missing data and outliers, which might skew the results and participants who did not end the survey or failed the manipulation test were sorted out to ensure the reliability of the data. Then the categorical variables, including green appeals and benefit association needed to be coded numerically for the further analysis.

Afterwards, for providing a first overview of the data, descriptive statistics were conducted to get variables means, standard deviations and frequencies across the four different conditions. This step was essential in understanding the basic characteristics of the data and identifying any potential uses before conducting more complex analyses.

In the first step, the data had to be labelled after the four different condition groups and separately the appeal types were coded as 1=Concrete, 2= Abstract, and benefit type associations as 1= Self, 2= Other.

For Hypotheses 1, 2a,3a and 4a a MANOVA was conducted, to test the main effects of appeal type on sustainable purchase intention and consumer perceptions (perceived authenticity, green confusion, perceived trustworthiness) as well as the interaction effects of appeal type combined with benefit associations.

For Hypotheses 2b, 3b and 4b several mediation analyses were conducted to test the mediating effects of different levels of perceived authenticity, green confusion and perceived trustworthiness on the dependent variable sustainable purchase intention. In this step, consumer perceptions act as mediators between the independent variable ‘green appeal type’ and the dependent variable ‘sustainable purchase intention’. The mediation analyses were performed by Model 4 of the Process macro for SPSS, by F. Hayes (2018). This analysis was helpful to understand if the proposed mediators influenced the relationship between green appeals and consumers sustainable purchase intention.

For testing the moderating effect of benefit association for Hypothesis 5 and 6, with consumer perceptions as mediator between appeal type and purchase intention, the moderated mediation analysis was performed by Model 7 of the Process macro for SPSS, by F. Hayes (2018). This model specified a simple first-stage moderation where the direct effect of X (appeal type) on M (consumer perceptions) and the indirect effect of X (appeal type) on Y (purchase intentions) through M (consumer perceptions) are moderated by W (Benefit association). As Model 7 includes the general mediation effects of Model 4 proposed in Hypothesis 2b, 3b and 4b, only the results of Model 7 of the Process macro for SPSS, by F. Hayes (2018) were reported.

By following this data analysis plan, the study aimed to systematically examine the influence of the different types of green appeals and benefits associations on consumers perceptions, in term of perceived authenticity, confusion and trust and their sustainable purchase intentions. The results will offer valuable insights into effective strategies regarding authenticity, coherence, and credibility for promoting sustainable fashion products through social media posts.

## 4 Results

### 4.1 Manipulation Check

Participants were randomly assigned to one of the four conditions, either seeing concrete information with other-oriented benefit slogans / self-oriented benefit slogans or abstract information combined with other-oriented benefits / self-oriented benefits. At the end of the survey, they were asked to indicate the primary focus of the benefits described in the post and the type of information they saw in the caption.

The manipulation check of the provided benefit association was the following: 76.71 % of the participants correctly identified that the benefits were primarily focused on “*Other*”. Conversely, 82.43 % of the participants correctly identified that the benefits were primarily focused on “*Individual Self*”. A Chi-square test of independence was performed to examine the relationship between the experimental conditions and participants' perceptions of benefit associations. The analysis revealed a significant association between the condition groups and the identified benefit association,  $\chi^2(3, N = 119) = 115.143, p < .001$ . This result indicates that participants' perceptions of whether the benefits were focused on “*Others*”, or “*Individual Self*” varied significantly depending on the condition they were assigned to, supporting the effectiveness of the experimental manipulation.

As participants were also asked to evaluate the clarity of information, 83.56 % correctly indicated that the information in the caption was “*general and vague*”, representing the abstract green appeal caption. 75.68 % of the participants correctly indicated that the information in the caption was “*transparent and clear*”, representing the concrete green appeal caption. The Chi-square test results indicated a significant association between the condition groups and the perceived clarity of the caption,  $\chi^2(3, N = 119) = 119.000, p < .001$ . These results demonstrate that participants' perceptions of the caption as either “*specific and detailed*” or “*general and vague*” were significantly influenced by the experimental condition they were exposed to. Thus, the manipulation check ensured that the manipulations of appeal type and benefit associations in the post and caption were successful and mainly recognized as such.

### 4.2 Descriptive Statistics of Consumer Perceptions and Sustainable Purchase Intention

The following presents the descriptive statistics of consumers' perceptions, including perceived post authenticity, green confusion, perceived trustworthiness (mediators) and sustainable purchase intention (dependent variable) across the green appeals and benefit associations. The results of the multivariate tests show the overall significance of the model.

For appeal type alone the Wilks' Lambda is .944, with a p-value of .087, indicating no significant differences between the groups on the combination of the dependent variables. For the benefit association type alone, the Wilks' Lambda has a value of .944, with a p-value of .087, suggesting that the groups have no discrimination.

Table 4 shows the descriptive statistics of green appeal types and benefit association on consumers perceived authenticity, green confusion and perceived trustworthiness and purchase intentions, showing an overall more positive score for concrete green appeals, compared to abstract green appeals. Additionally, there is an overall more positive score for the other-oriented benefit associations. Thus, other-oriented benefit associations are perceived as more authentic, less confusing, more trustworthy and indicate higher purchase intentions, compared to self-oriented benefit associations.

**Table 4**

*Descriptive Statistics of Appeal Type and Benefit Associations*

		Appeal Type				Benefit Associations			
		Concrete		Abstract		Self-oriented		Other-oriented	
Consumer Perceptions		Mean	SD	Mean	SD	Mean	SD	Mean	SD
	Authenticity	3.60	.832	3.31	.854	3.37	.807	3.53	.899
	Confusion	2.61	1.123	3.21	1.003	2.97	1.125	2.88	1.077
	Trustworthiness	3.12	.755	2.78	.690	2.86	.725	3.03	.749
Purchase intention									
	Purchase Intention	3.34	.949	3.00	.911	3.02	.964	3.30	.903
Totals(n)		56		63		61		58	

*5-point Likert Scale (1 = completely disagree; 5 = completely agree)*

### 4.3 Direct Effects of Appeal Types

Firstly, it was examined how different types of green appeals influenced sustainable purchase intentions. The MANOVA results revealed a significant effect, showing that concrete green appeals led to higher intentions to purchase sustainable products compared to abstract green appeals,  $F(1, 118) = 3.951$ ,  $p = .049$ ,  $\eta^2 = .033$ . This finding supports Hypothesis 1.

Secondly, for testing Hypothesis 2a, which suggested that concrete green appeals would be perceived as more authentic than abstract appeals, the results showed no significant effect,  $F(1, 118) = 3.677$ ,  $p = .058$ ,  $n^2 = .030$ . Accordingly, Hypothesis 2a was not confirmed.

Hypothesis 3a proposed that concrete green appeals would be perceived as less confusing to participants than abstract appeals. This hypothesis found strong support in the data. The MANOVA revealed a significant effect, with concrete appeals being perceived as less confusing,  $F(1, 118) = 9.458$ ,  $p = .003$ ,  $n^2 = .075$ .

Finally, testing Hypothesis 4a, which posited that concrete green appeals would be trusted more than abstract appeals. The MANOVA results indicated a significant effect, with concrete appeals being perceived as more trustworthy,  $F(1, 118) = 6.731$ ,  $p = .011$ ,  $n^2 = .054$ . This finding confirms Hypothesis 4a.

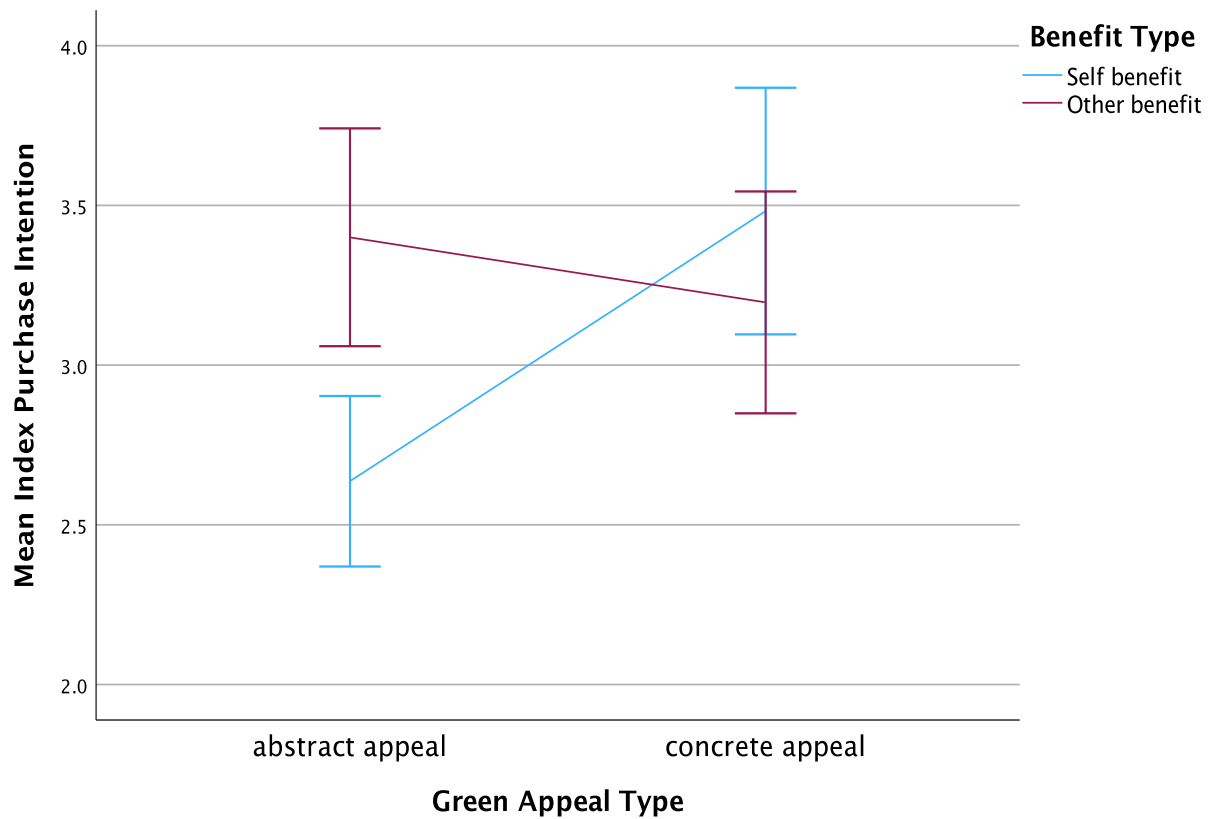
#### **4.4 Interaction effects Appeal Type x Benefit Associations**

To examine if the type of benefit association directly affects consumers' purchase intention, the MANOVA results showed no significant effect,  $F(1, 119) = 2.615$ ,  $p = .109$ ,  $n^2 = .022$ . This suggest that whether the benefits are focused on the individual self or on others does not significant change consumers' likelihood to purchase.

To examine the interaction between appeal type and benefit association on consumers' sustainable purchase intentions, a MANOVA analysis was conducted. The results showed a highly significant effect,  $F(1, 118) = 10.332$ ,  $p = .002$ ,  $n^2 = .109$ . The post-hoc test revealed that consumers' sustainable purchase intentions were significantly higher when abstract green appeals were paired with other-oriented benefits compared to self-oriented benefits ( $MD = .764$ ,  $SD = .224$ ,  $p < .001$ ). On the other hand, for concrete green appeals, there was no significant difference between emphasizing self-oriented and other-oriented benefits on sustainable purchase intentions ( $MD = .286$ ,  $SD = .237$ ,  $p = .231$ ). These results are visualized in Figure 3.

**Figure 3**

*Interaction Effect of Appeal type and benefit association on Purchase Intention*

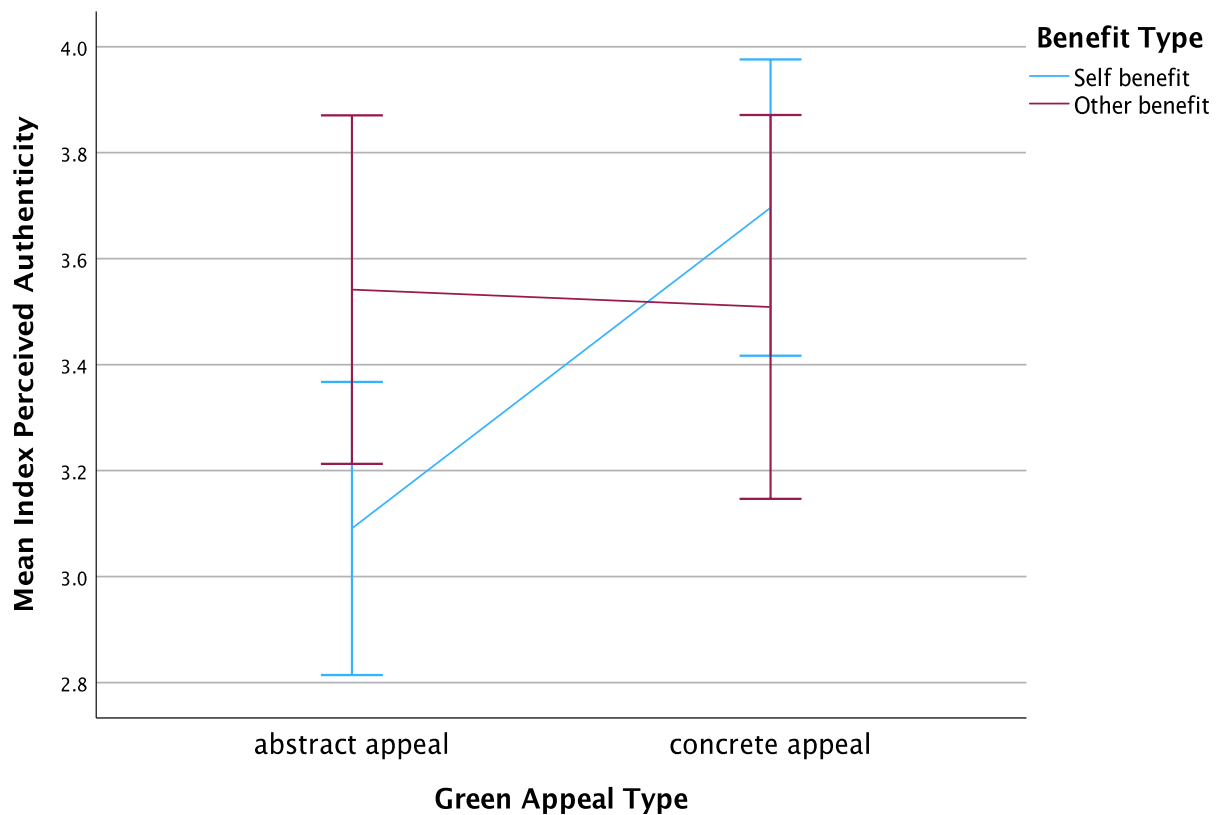


The MANOVA results indicated no significant main effect of a certain benefit association type on perceived post authenticity  $F(1, 118) = 1.007, p = .318, \eta^2 = .009$ . This suggests that the type of benefit association alone (rather self-oriented or other-oriented) does not significantly affect the perceived authenticity of the post.

However, when observing how appeal type and benefit association interact, there was a significant effect on perceived authenticity,  $F(1, 118) = 4.358, p = .039, \eta^2 = .049$ . This suggests that combining certain benefit types with green appeals can enhance perceived authenticity. Furthermore, the post-hoc test found that abstract green appeals paired with other-oriented benefits led to higher perceived authenticity than when paired with self-oriented benefits ( $MD = 0.451, SD = .210, p = .034$ ). On the other hand, for concrete green appeals, there was no significant difference in perceived authenticity between self- and other-oriented benefits ( $MD = .188, SD = .222, p = .401$ ).

**Figure 4**

*Interaction Effect of Appeal type and benefit association on Perceived authenticity*



The MANOVA results for the main effect of benefit association on green confusion indicated no significant effect,  $F(1, 118) = .189, p = .664, \eta^2 = .002$ . This suggests that the type of benefit association (whether self-oriented or other-oriented) does not significantly impact the level of green confusion. Thus, consumers do not perceive a certain type of benefit association as more confusing than the other, implying that the clarity of the message is not dependent on the highlighted benefit association.

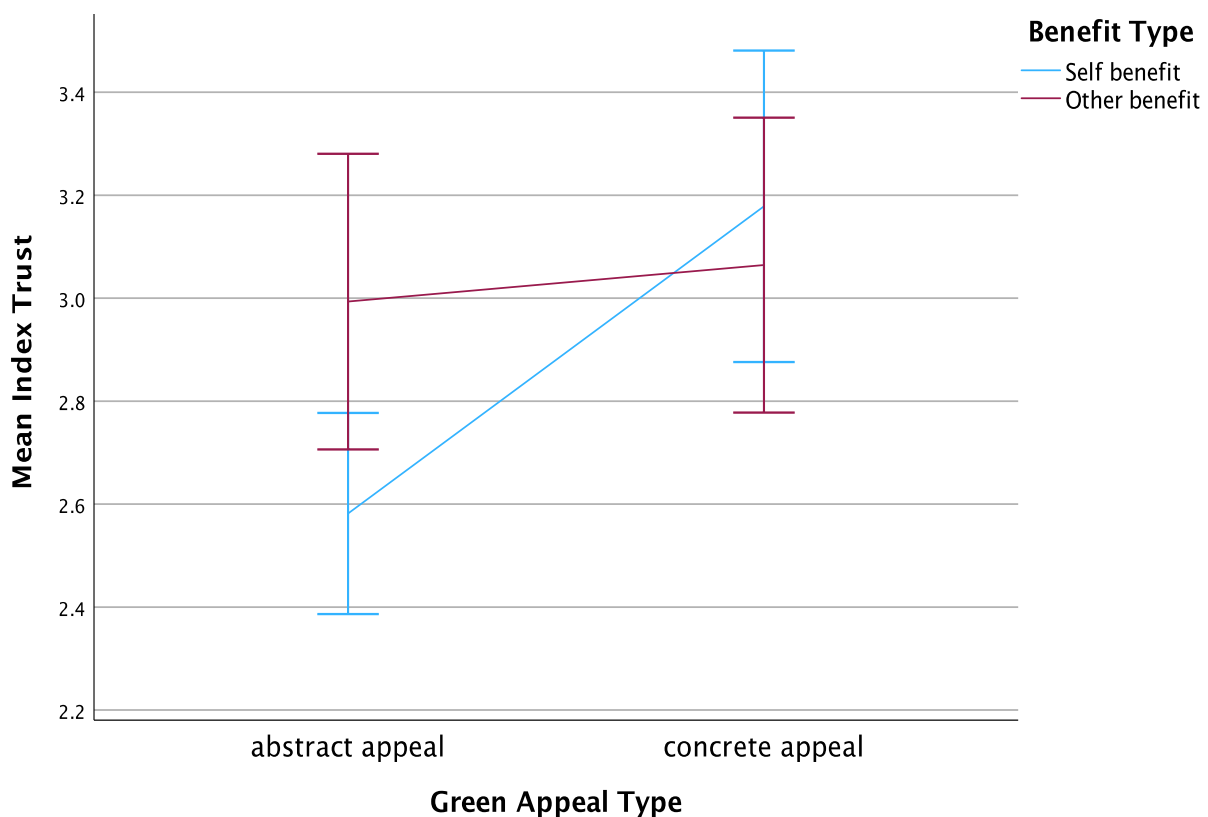
The interaction effect of appeal type and benefit associations on green confusion showed no significant result:  $F(1, 118) = .111, p = .740, \eta^2 = .075$ . This indicated that the combination of appeal types and benefit associations does not significantly affect consumers green confusion. Therefore, while concrete green appeals are generally reducing green confusion compared to abstract green appeals, the type of benefit association and the interaction of green appeals with benefit association does not significantly influence consumers level of perceived green confusion.

The MANOVA results for the effect of benefit association on perceived trustworthiness did not show a significant effect  $F(1, 118) = 1.618, p = .206, n^2 = .014$ . This suggests that the type of benefit association does not significantly impact the perceived trustworthiness of the post. Thus, consumers did not perceive one type of benefit association as more trustworthy than the other, indicating that the trustworthiness of the post is not significantly influenced by the benefit association type.

The interaction between appeal type and benefit association had a significant effect on perceived trustworthiness:  $F(1, 118) = 4.057, p = .046, n^2 = .075$ . This indicated that combining green appeals with benefit associations impacts as how trustworthy the post is perceived. Specifically, as visible in Figure 6, abstract green appeals combined with other-oriented benefit associations were perceived as more trustworthy than when paired with self-oriented benefits (MD = .412, SD = .179,  $p = .023$ ). Conversely, when using concrete green appeals, there was no significant difference in perceived trustworthiness between the different types of benefits (MD = .114, SD = .190,  $p = .548$ ), indicating that the type of benefit association does not strongly affect the perceived trustworthiness with concrete appeals.

**Figure 5**

*Interaction Effect of Appeal type and benefit association on Perceived Trustworthiness*



## 4.5 (Moderated) Mediation effects

This section presents the results of the (moderated) mediation analyses conducted to test Hypotheses 2b, 3b, 4b, 5, and 6. The focus is on examining how perceived post authenticity, green confusion, and perceived trustworthiness mediate the relationship between green appeals and sustainable purchase intention. Additionally, the analysis explores the moderating role of benefit associations within this context.

### 4.5.1 *Perceived Authenticity*

The mediation analysis showed that perceived post authenticity does not significantly mediate the relationship between green appeals and sustainable purchase intention ( $b = .2012$ , 95% CI  $[-.0082; .4415]$ ). Consequently, Hypothesis 2b is not supported. However, perceived post authenticity still emerged as a strong predictor of sustainable purchase intention. The moderated mediation analysis found that the effect of green appeals on purchase intention, through perceived authenticity, is significantly influenced by self-oriented benefit associations ( $b = .4203$   $[0.1425; .7265]$ ). The analysis also revealed a significant result ( $b = -.4430$   $[-.9174; -.0213]$ ), indicating that self-oriented benefit associations strengthen the mediation effect of perceived authenticity. These findings support Hypothesis 5a, while rejecting Hypothesis 6a, as no significant effect was observed for other-oriented benefit associations.

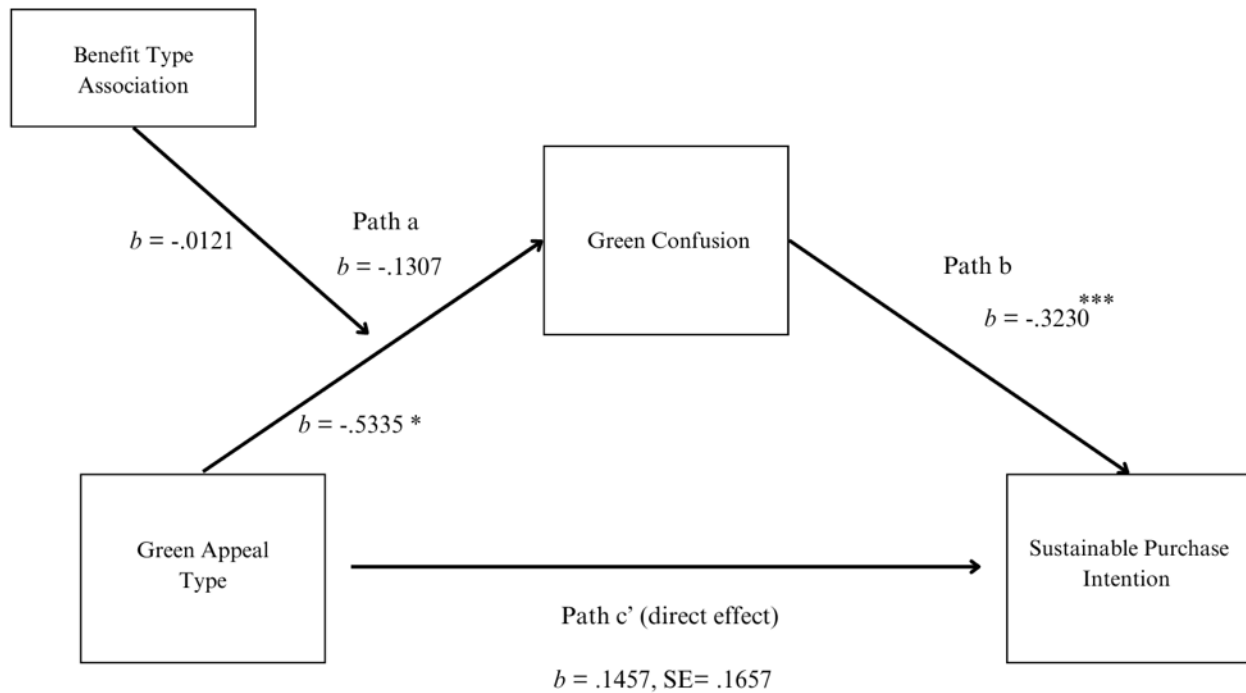
### 4.5.2 *Green Confusion*

Green confusion was found to fully mediate the relationship between green appeals and sustainable purchase intention ( $b = .2768$ , 95% CI  $[.0819; .5113]$ ). In particular, concrete green appeals significantly reduced green confusion, which in turn increased sustainable purchase intention. These findings support Hypothesis 3b.

However, there was no significant moderated mediation effect for green confusion ( $b = .0422$   $[-.2553; .2799]$ ), meaning that the mediation effect did not differ significantly between self-oriented and other-oriented benefit associations. The indirect effect through green confusion was only significant for other-oriented benefit associations ( $b = .2146$   $[.0415; .4168]$ ), indicating that these associations can affect the relationship between appeal type and purchase intention. Despite this, since the moderated mediation effect was not significant, Hypotheses 5b and 6b are not supported.

**Figure 6**

*Moderated Mediation Model for Green Appeal x Benefit Association and Green confusion*



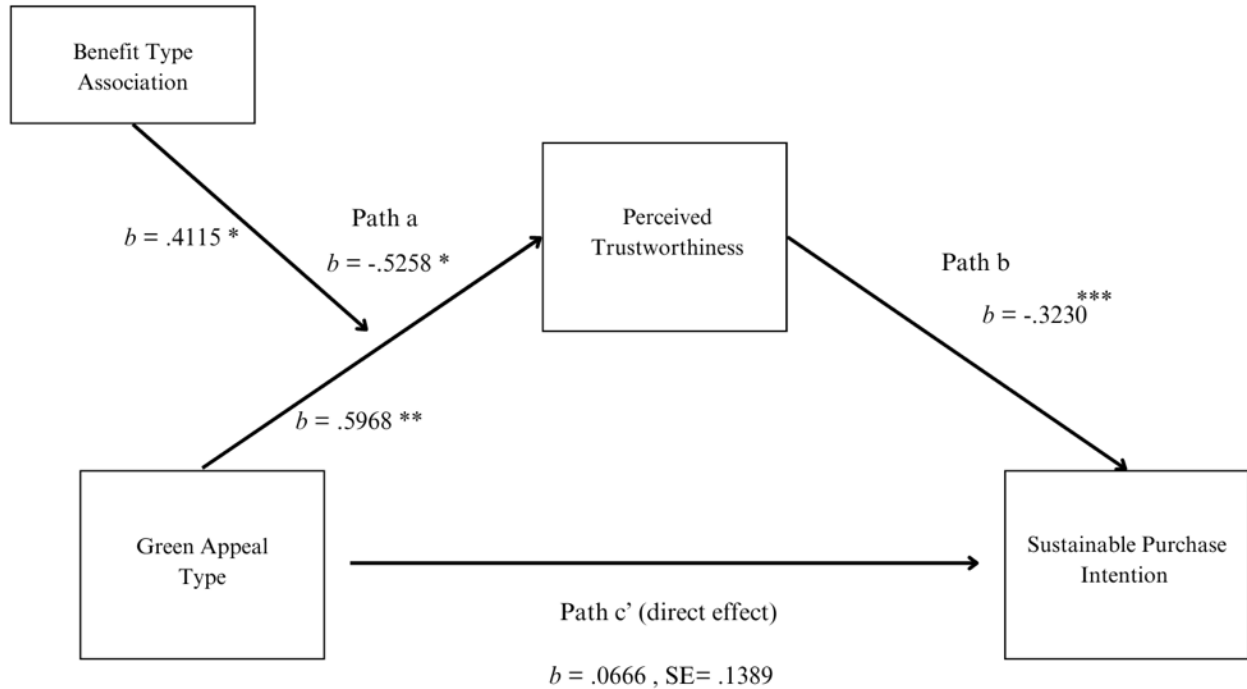
#### **4.5.3 Perceived Trustworthiness**

Perceived trustworthiness significantly mediated the relationship between green appeals and sustainable purchase intention ( $b = .2727$ , 95% CI [.0574; .4931]), with concrete green appeals positively impacting perceived trustworthiness. These findings fully support Hypothesis 4b.

The moderated mediation analysis showed that self-oriented benefit associations significantly strengthened the mediation effect of perceived trustworthiness on purchase intention ( $b = .4735$ , 95% CI [0.1847, .7979]). However, the overall index of moderated mediation was not significant ( $b = -.4172$ , 95% CI [-.9132, .0065]), indicating that the mediation effect does not differ substantially between different types of benefit associations. As a result, Hypothesis 5c is supported, while Hypothesis 6c is rejected.

**Figure 7**

*Moderated Mediation for Appeal Type x Benefit association on Perceived Trustworthiness*



#### 4.6 Hypotheses Conclusion

Considering the presented main and interaction effects of appeal types and benefit association and the mediating and moderated mediating effects of consumer perceptions on their purchase intention, 6 of 9 Hypotheses can be (partially) supported, as Table 5 demonstrates. These results will be discussed in the following section.

**Table 5***Hypotheses Overview & Outcomes*

<b>Hypotheses and Question</b>	<b>Outcome</b>
<b>H1</b> <i>Posts with concrete formulated green appeals will than lead to higher sustainable purchase intentions than posts with abstract formulated green appeals.</i>	Supported
<b>H2a</b> <i>Posts with concrete formulated green appeals will be perceived as more authentic than posts with abstract formulated green appeals.</i>	Rejected
<b>H2b</b> <i>Higher perceived authenticity will mediate the relationship between green appeals and consumers sustainable purchase intentions.</i>	Rejected
<b>H3a</b> <i>Posts with concrete formulated green appeals will be perceived as less confusing than posts with abstract formulated green appeals.</i>	Supported
<b>H3b</b> <i>Lower green confusion will mediate the relationship between green appeals and consumers sustainable purchase intention.</i>	Supported
<b>H4a</b> <i>Posts with concrete formulated green appeals will be perceived as more trustworthy than posts with abstract formulated green appeals.</i>	Supported
<b>H4b</b> <i>Higher perceived trustworthiness will mediate the relationship between green appeals and consumers sustainable purchase intentions.</i>	Supported
<b>H5</b> <i>The effectiveness of concrete green appeals will be enhanced through self-oriented benefit associations, leading to a) more perceived authenticity b) less green confusion c) more perceived trustworthiness and d) higher sustainable purchase intentions compared to other-oriented benefit associations.</i>	Partially supported
<b>H6</b> <i>The effectiveness of abstract green appeals will be enhanced through other-oriented benefit associations, leading to a) more perceived authenticity b) less green confusion c) more perceived trustworthiness and d) higher sustainable purchase intentions compared to self-oriented benefit associations.</i>	Rejected

## 5 Discussion & Conclusion

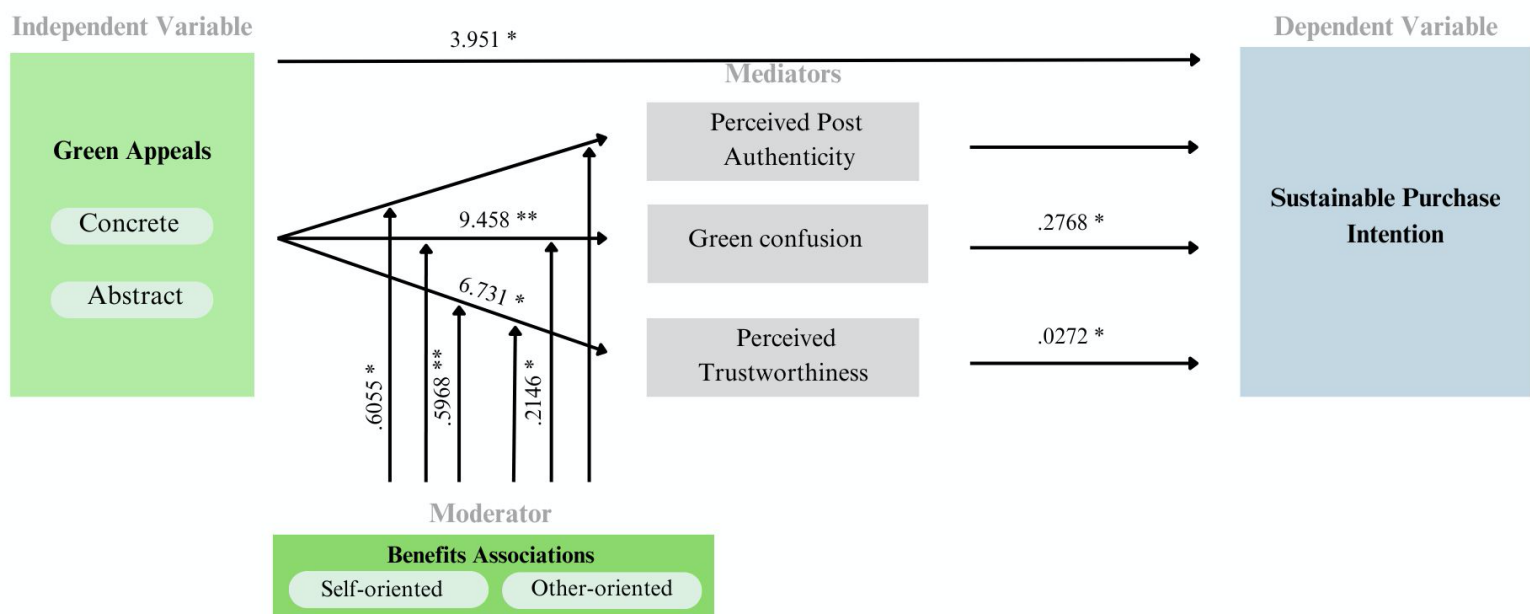
### 5.1 Overview of the Main findings

The main findings of this research indicate that concrete green appeals, which offer clear and detailed information, significantly increase consumers' purchase intentions compared to vague, abstract appeals (supporting H1). These concrete appeals were also perceived as less confusing and more trustworthy, highlighting the importance of clarity in reducing consumer confusion and building trust to enhance purchase intentions (supporting H3 and H4).

Additionally, while benefit orientations (whether focused on self-interest or others) alone did not strongly influence sustainable purchase intentions, they were effective when paired with the right type of green appeal. Specifically, self-oriented benefits strengthened the relationship between concrete green appeals and sustainable purchase intentions, particularly through perceived authenticity and trustworthiness, supporting Hypotheses 5a, 5c, and 5d. On the other hand, other-oriented benefits combined with abstract green appeals were expected to enhance perceived authenticity, trustworthiness, and purchase intention. However, these interaction effects were not strongly confirmed in the further analysis of moderated mediation effects, leading to the rejection of Hypothesis 6. A summary of all significant findings is presented in Figure 8.

**Figure 8**

*Overview Model of Key Research Elements and Findings*



## 5.2 Discussion

This study explored how different types of green marketing messages—specifically green appeals and benefit associations—affect consumer perceptions, such as authenticity, green confusion, and trustworthiness, and how these perceptions influence sustainable purchase intentions in the fashion industry, particularly through Instagram posts. These insights contribute to the broader discussion on green marketing by validating and expanding existing theories, while also revealing new dimensions centered on three key areas: (1) the effectiveness of concrete versus abstract green appeals, (2) the role of benefit associations, and (3) the specific conditions under which the interaction between appeal types and benefit associations has a significant impact. These points will be discussed in the following:

### 5.2.1 *Effectiveness of Concrete Appeals vs Abstract Appeals*

A key finding of this research is the effectiveness of concrete green appeals in boosting consumers' purchase intentions compared to abstract appeals. This result is consistent with Construal Level Theory (CLT), which posits that psychologically closer objects or events are perceived in a more detailed and transparent way (Ahmad et al., 2024; Jaeger & Weber, 2020). Therefore, concrete appeals minimize psychological distance by making sustainability efforts feel more immediate and relatable to consumers. This psychological proximity enhances trust as consumers can more easily visualize and believe in the sustainability efforts of the brand. Moreover, concrete messaging taps into a cognitive bias where specific information is often deemed more credible than vague statements, reinforcing the idea that specificity in communication improves trust (Kang & Hustvedt, 2014).

Additionally, concrete green appeals not only enhance perceived trustworthiness but also reduce green confusion. This reduction in confusion is vital because it fosters trust, which is a crucial driver of purchase intentions (Chen & Chang, 2013; Walsh & Mitchell, 2010). Therefore, the significance of clarity in green marketing is emphasized by these findings, indicating that clear and detailed messaging can significantly influence consumer behavior by diminishing confusion and enhancing trust in sustainability claims.

Conversely, abstract green appeals, which typically rely on broad and ambiguous formulations, were found to be less effective. These appeals are perceived as psychologically distant, leading to higher levels of green confusion and lower trust. The lack of specificity in abstract green claims makes it challenging for consumers to assess the authenticity of the message. Previous research by Chen and Chang (2013) highlighted that perceived authenticity

is essential for building trust in green marketing claims. When the messaging is overly vague, it can generate doubt about whether the brand is genuinely committed to sustainability or merely using it as a marketing tactic. This doubt weakens the effectiveness of abstract green appeals, reducing their capacity to drive sustainable purchase intentions.

These findings suggest that in the context of green marketing, concreteness in messaging is crucial for effectively influencing consumer behavior. However, the value of abstract appeals should not be completely disregarded, as they can be strategically beneficial in different contexts, particularly when combined with other-oriented benefit associations.

### **5.2.2 *Benefit associations***

Previous research has emphasized that self-benefit associations are effective because they align with individual needs and preferences, emphasizing personal advantages (Kyu Kim et al., 2021; Yang et al., 2015). Studies by Jaeger & Weber (2020) and Kyu Kim et al. (2021) suggested that the benefit association could strongly influence consumer behavior, with self-oriented benefits typically driving individual purchase decisions and other-oriented benefits appealing to a sense of collective responsibility.

However, the current study's findings challenge this assumption, revealing that benefit associations alone, whether self-oriented or other-oriented, do not significantly impact consumer perceptions or sustainable purchase intentions. These findings can be explained by the shift that modern consumers have developed a more critical eye in their evaluation of marketing messages (Kamal & Himel, 2023). Due to greenwashing awareness, this increased consumer skepticism may lead to lower success of benefit associations in green marketing. Consequently, consumers seek more credible, verifiable information that confirms the commitment of a brand to sustainability. Without concrete evidence, such as third-party certifications or transparent disclosures, benefit associations may be perceived as superficial or even potentially misleading. Thus, benefit associations without substantiation fail to build trust or influence purchase decisions, which explain the current findings.

Moreover, there seems to be a stronger preference for integrated, authentic brand narrative rather than isolated benefit associations in today's social media world. Consumers expect brands to tell a compelling, cohesive story about their sustainability journey, integrating environmental claims into their overall mission and values (Monmoine, 2021). As benefit associations are not part of a broader narrative that illustrates a brand's sustainability efforts, they may be less persuasive.

Accordingly, simply telling consumers that a product is self-enhancing or beneficial for the environment or future generations is not convincing enough anymore. This suggests that modern consumers may be more discerning, requiring more than just the type of benefit to influence their behavior. The context in which these benefits are presented, such as the clarity of the appeal and the perceived trustworthiness of the message, plays therefore a more crucial role, as highlighted by previous research of Yang et al. (2015). To further understand these dynamics, it is essential to discuss how different types of green appeals interact with benefit associations and the conditions under which these combinations are most effective.

### ***5.2.3 Impact of Appeals- Benefit Association Interactions***

The current study confirms that the effectiveness of benefit associations in green marketing is significantly influenced by how they interact with the type of green appeals used (Yang et al., 2015). However, the success of these combinations may be dependent on the context varying across different consumer motivations and campaign objectives:

Therefore, the combination of concrete green appeals with self-oriented benefits is particularly effective in contexts where consumers are motivated by personal gains and tangible rewards (Jaeger & Weber, 2020; Kyu Kim et al., 2021; Yang et al., 2015). The combination of concrete green claims and self-benefits works well in low-engagement purchase contexts, where consumers are more likely to be influenced by clear, direct messaging that aligns with their immediate self-interests. Aligning with the Self-Enhancement Theory, suggesting that individuals are motivated to maintain or enhance their self-concept (Kyu Kim et al., 2021), consumers are more likely to be persuaded when being seen as eco-conscious or health conscious. The current study aligns with this theory, showing that when consumers can see clear, tangible self-benefit associations, they perceive the brand as more authentic and trustworthy, which in turn drives higher sustainable purchase intentions.

However, the effectiveness of this combination diminishes in high-engagement, cause-driven contexts where consumers are more focused on broader ethical or communal considerations rather than immediate self-gains (Mangió et al., 2023). In this context, messages that overly emphasize self-benefits may appear self-serving or insincere, therefore reducing their effectiveness. For instance, in campaigns aimed at addressing larger environmental issues, such as climate change, appeals that focus mainly on self-benefits may fail to resonate with consumers who are motivated by collective action and social responsibility.

Accordingly, while concrete appeals generally perform better, abstract appeals should not be entirely disregarded. Moreover, abstract green appeals that emphasize collective benefits, such as contributing to a larger environmental cause or supporting future generations, may be effective. For example, in campaigns designed to reduce plastic waste, abstract appeals emphasizing the collective impact of individual actions can create a powerful sense of shared responsibility and mobilize broader consumer action (Mangió et al., 2023). Hereby, the effectiveness of abstract appeals is heightened because the primary objective is more to raise awareness, mobilize support, or foster community engagement instead of achieving immediate purchase decisions.

Therefore, it is assumed that key to the success of abstract appeals lies in their ability to build a strong emotional connection between the cause and the consumer. When consumers feel that their behavior, whether through purchasing a sustainable product or advocating for an environmental cause, contributes meaningfully to solving a problem, they may be more likely to engage (Mangió et al., 2023).

Therefore, the effectiveness of both concrete and abstract appeals combined with different benefit association types is highly context dependent. Concrete appeals with self-oriented benefits are most effective in contexts where consumers prioritize self-enhancement. This combination works well when consumers are open to messages that directly address their immediate needs. In contrast, abstract appeals with other-oriented benefits may be more effective in high-engagement, cause-driven contexts. Here, consumers are motivated by collective responsibility and are inspired by messages that emphasize the broader social or environmental impact of their actions, resonating with their values and sense of purpose.

### **5.3 Limitations and Future Research**

One limitation of this study is its context-specific focus, which may limit the generalizability of the findings regarding the effectiveness of green appeals and benefit associations. The research was conducted within a specific campaign context using a one-time exposure Instagram post, which may not fully capture how these appeals work in other settings. Therefore, future research could explore these effects across different campaign types, such as cause-related marketing, corporate social responsibility initiatives, and product-specific advertising, to better understand the conditions under which the green appeal type and benefit associations are most effective.

Another limitation was the post featuring a woman wearing a denim outfit, while the sample population was predominantly male. This gender mismatch may have influenced the

results, particularly the intentions to purchase the advertised product. Future research should consider using more inclusive stimuli, such as featuring both male and female models or gender-neutral fashion items, to ensure broader relevance and resonance.

Additionally, the study also used a fictional brand name, which may have affected consumers' perceptions of authenticity and trustworthiness. Future research could explore the impact of brand familiarity by comparing consumers' responses to popular versus unknown brands, providing more insights into how brand reputation influences consumer perceptions and purchase intentions in green marketing.

Moreover, the measurement of green confusion in this study was limited by the combination of different scales that did not demonstrate strong reliability. Future studies should refine these measures, clearly differentiating between constructs like green confusion and information overload, to ensure more accurate and reliable results. Additionally, exploring potential moderators such as environmental consciousness, sustainable awareness, or brand loyalty could provide a deeper understanding of how these factors influence the effectiveness of different green appeals and benefit associations.

Also, the choice of the media channel could significantly influence how green marketing messages are perceived. Future studies could investigate whether green appeals are more effective in digital media, where engagement can be personalized and interactive, compared to traditional media, which might reach a broader audience, but is less personalized. Understanding how green appeals and benefit associations perform across these platforms could also provide insights for optimizing media strategies in green marketing.

Lastly, future research could examine how green appeals perform across different product categories, such as sustainable lifestyle items, personal care products, technology, and household goods. This could help determine the effectiveness of these appeals in both low-cost, high-frequency purchases and high-involvement, like expensive items.

## **5.4 Theoretical Implications**

This study contributes valuable insights to the theoretical frameworks of green marketing, particularly in understanding how different types of green appeals, concrete versus abstract, interact with self-oriented and other-oriented benefit associations to influence consumer perceptions and behaviors.

Firstly, the findings strongly support Construal Level Theory, which suggests that concrete, detailed information is perceived as psychologically closer and more tangible to consumers (Ahmad et al., 2024; Jaeger & Weber, 2020). The study demonstrated that concrete

green appeals significantly enhance consumer trust and reduce green confusion, thereby increasing sustainable purchase intentions. This posits that when sustainability efforts are presented in a clear and immediate manner, consumers are more likely to trust and engage with the message. For future research, these findings suggest a need to explore how varying levels of message concreteness influence consumer perceptions across different product categories and cultural contexts, potentially offering new insights into the application of CLT in green marketing.

The study also aligns with Self-Enhancement Theory, which posits that individuals are motivated to engage in behaviors that enhance their self-concept (Kyu Kim et al., 2021). The research found that self-oriented benefits, when paired with concrete green appeals, effectively increase perceived authenticity and trustworthiness, leading to higher sustainable purchase intentions. This suggests that consumers are more responsive to green marketing messages that clearly link personal benefits to sustainable behavior. Future research could expand on this by investigating how different demographic or psychographic segments respond to self-enhancement cues in green marketing, providing a more nuanced understanding of how to tailor messages to diverse audiences.

Interestingly, the study found that benefit associations alone—whether self-oriented or other-oriented—did not significantly influence sustainable purchase intentions. This challenges previous assumptions that simply emphasizing personal or collective benefits would be enough to drive consumer behavior. The findings suggest that the effectiveness of benefit associations is highly context-dependent and must be strategically paired with the appropriate type of green appeal. Future research should explore how different contexts, such as high-involvement versus low-involvement products or varying cultural settings, affect the interaction between benefit associations and green appeals. This could clarify under what conditions self-oriented or other-oriented benefits are most persuasive, potentially refining marketing strategies.

The study also reveals that abstract green appeals, which are often broad and less specific, can be effective, but their success is heavily dependent on the context (Yang et al., 2015). Therefore, abstract appeals tend to be more impactful in high-engagement, cause-driven campaigns where consumers are emotionally invested (Mangió et al., 2023). This finding indicates that while abstract messaging may struggle in more transactional or low-engagement contexts, it can resonate deeply when aligned with the right audience and campaign objectives. Future research should delve deeper into the mechanisms behind this context dependence, examining how emotional engagement and campaign framing influence the effectiveness of abstract appeals.

## **5.5 Managerial Implications**

The findings of this study provide several important implications for managers in the fashion industry who are looking to enhance the effectiveness of their green marketing strategies on platforms like Instagram. One of the key takeaways is the critical role that the alignment between the type of green appeal (concrete vs. abstract) and the associated benefits (self-oriented vs. other-oriented) plays in shaping consumer perceptions and behaviors. Understanding this alignment can help managers craft more effective and persuasive marketing messages that resonate with their target audiences.

Firstly, managers should recognize the power of concrete green appeals when they are paired with self-oriented benefits. For sustainable fashion brands, this means that messaging should be clear, specific, and directly related to the consumer's personal gains. For example, instead of using vague statements like "eco-friendly materials", brands should provide detailed claims like "made with 50% recycled materials, reducing your carbon footprint." This approach not only enhances trust but also positions the brand as genuinely committed to sustainability, thereby reducing skepticism, and increasing the likelihood of purchases.

On the other hand, for campaigns targeting consumers who are motivated by broader societal or environmental concerns, abstract green appeals paired with other-oriented benefits can be effective. These appeals tap into consumers' values and broader concerns about the environment, making them feel that their purchase decisions contribute to a greater good. For instance, messaging that emphasizes the positive impact on future generations or the reduction of overall environmental harm, such as "join us in preserving the planet for future generations" can also resonate well with this audience. This approach is particularly relevant for brands that want to position themselves as leaders in the sustainability movement, appealing to consumers who are more focused on collective benefits than on individual gains.

Overall, marketers should therefore consider both the content and framing of their messages, strategically pairing benefit associations with the appropriate type of green appeal to maximize their impact. By understanding the psychological mechanisms that drive consumer perceptions and behavior, brands can develop more effective green marketing strategies that not only resonate with consumers' values but also translate into sustainable purchase behaviors.

## **5.6 Conclusion**

This study highlights the critical importance of aligning green marketing strategies with the right type of green appeal and benefit associations. The research clearly shows that concrete green appeals, offering specific and detailed information, are powerful tools for building

consumer trust, reducing confusion, and ultimately driving sustainable purchase intentions. These findings emphasize that clarity and transparency in messaging is not just beneficial, moreover it is essential for making a real impact in green marketing.

While benefit orientations, whether self-oriented or other-oriented, may not drive sustainable behavior on their own, their effectiveness lies in their combination with the right type of appeal. The combination of self-oriented benefits with concrete messages proved particularly effective, showing that consumers are more likely to engage in sustainable purchases when they see clear, personal advantages. On the other hand, abstract appeals, though generally less effective, can resonate deeply in the right context with other-oriented benefits, particularly in emotionally charged, cause-driven campaigns.

These insights are critical in developing an authentic and trustworthy sustainable fashion post, overcoming greenwashing strategies and enhance consumer engagement for more sustainable purchases. It highlights the need for brands to carefully consider not only the content of their green messages but also the framing and specificity of the benefits presented. This research offers valuable guidance for marketers in crafting effective green marketing strategies for sustainable fashion on Instagram.

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## 6 Appendix

During the preparation of this work the author(s) used ChatGPT in order to summarize the relevant factors in the literature. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the work.

### *Appendix A: H&M's Conscious Collection greenwashing campaign example*



H&M launched its Conscious collection in April

### **Appendix B: Pre-Test**

[https://miro.com/app/board/uXjVKSp3rCg=/  
/](https://miro.com/app/board/uXjVKSp3rCg=/)

## Appendix C: Survey

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### Start of Block: Intro

#### **Intro Welcome to my research study!**

First, thank you for your interest in participating in my research project of the BMS faculty of University of Twente. It is important that you learn about the procedure of this study, before it starts, so please read the following text carefully. If anything is unclear to you, feel free to ask me @c.wiederstein@student.utwente.nl

I will be happy to answer any questions you may have.

#### **Goal of the study**

The purpose of this research for my Master thesis is to explore the role of green consumption in the context of sustainable fashion.

#### **Procedure of the study**

Participation will take approximately 10 minutes. During this time you will first see an Instagram post and afterwards answer questions about your personal perceptions and purchase intentions. There are no considerable risks or inconvenience associated with your participation.

#### **Voluntary Participation**

Your participation in this study is voluntary: You are not obligated to participate. You may decide to stop your participation during the study. You do not have to provide a reason for stopping.

#### **Privacy**

We do not collect any personal data in this study.

**When you're completing the survey on your phone, you might need to zoom in on the picture to get a clearer view of the details. Please note that the post in the following slide is presented for one-time only; You will not be able to go back to the post so please read the post and the caption carefully.**

Thank you in advance for your assistance with this research!

Kind regards  
Chiara Wiederstein

---

### Start of Block: Voluntary Participation

Q23 Please indicate your choice below:

- ☐ Yes, I voluntarily consent to participate in this study! I understand that I can refuse to answer questions and withdraw from the study at any time without providing a reason. (1)
- ☐ No, I do not consent! (2)

*Skip To: End of Survey If Please indicate your choice below: = No, I do not consent!*

**End of Block: Voluntary Participation**

---

**Start of Block: Demographics**

D1 What is your gender?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Non-binary / third gender (3)
- ☐ Prefer not to answer (4)
- ☐ Prefer \_\_\_\_\_ to \_\_\_\_\_ self-describe: (5)
- 

D2 What is your age?

---

D5 What is your Nationality?

- ☐ Dutch (1)
  - ☐ German (2)
  - ☐ Others: (3) \_\_\_\_\_
- 

D3 What is the highest level of education you have completed ?

- ☐ High school graduate (1)
- ☐ Apprenticeship (2)
- ☐ Bachelor's degree (3)
- ☐ Master's degree (4)
- ☐ Prefer not to answer (5)
- ☐ Others (6) \_\_\_\_\_

End of Block: Demographics

---

Start of Block: Condition 1 concrete other

Intro *Please read the following text carefully.*

Imagine you are scrolling through your Instagram *ForYou* Page and recognize a post from a sustainable denim brand called *kasidenim*, producing sustainable jeans for women and men. This new sustainable jeans is the perfect fit for your summer because it matches perfectly with your daily style preferences, aligning style and comfort.

Please look carefully at the following Instagram post. Make sure to read the caption below the post as well. Some questions related to the post will be asked afterwards.

-----

Picture

End of Block: Condition 1 concrete other

---

Start of Block: Condition 2 concrete self

Q41 *Please read the following text carefully.*

Imagine you are scrolling through your Instagram *ForYou* Page and recognize a post from a sustainable denim brand called *kasidenim*, producing sustainable jeans for women and men. This new sustainable jeans is the perfect fit for your summer because it matches perfectly with your daily style preferences, aligning style and comfort.

Please look carefully at the following Instagram post. Make sure to read the caption below the post as well. Some questions related to the post will be asked afterwards.

-----

Q15

End of Block: Condition 2 concrete self

---

Start of Block: Condition 3 abstract other

Intro *Please read the following text carefully.*

Imagine you are scrolling through your Instagram *ForYou* Page and recognize a post from a sustainable denim brand called *kasidenim*, producing sustainable jeans for women and men. This new sustainable jeans is the perfect fit for your summer because it matches perfectly with your daily style preferences, aligning style and comfort.

Please look carefully at the following Instagram post. Make sure to read the caption below the post as well. Some questions related to the post will be asked afterwards.

---

Q15

End of Block: Condition 3 abstract other

---

Start of Block: Condition 4 abstract self

Intro *Please read the following text carefully.*

Imagine you are scrolling through your Instagram *ForYou* Page and recognize a post from a sustainable denim brand called *kasidenim*, producing sustainable jeans for women and men. This new sustainable jeans is the perfect fit for your summer because it matches perfectly with your daily style preferences, aligning style and comfort.

Please look carefully at the following Instagram post. Make sure to read the caption below the post as well. Some questions related to the post will be asked afterwards.

---

Q15

End of Block: Condition 4 abstract self

---

Start of Block: Perceived Post Authenticity

PA1 I believe the information in the post from *kasidenim* is authentic.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
-

PA2 I believe the information in the post from *kasidenim* is truthful.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
- 

PA3 I believe the information in the post from *kasidenim* is genuine.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
- 

PA4 I believe that *kasidenim* is transparent about its sustainability practices.

- ☐ Strongly disagree (1)
- ☐ Somewhat disagree (2)
- ☐ Neither agree nor disagree (3)
- ☐ Somewhat agree (4)
- ☐ Strongly agree (5)

End of Block: Perceived Post Authenticity

---

Start of Block: Green consumer confusion

GC1 It is difficult to recognize the differences between the jeans from *kasidenim* and other sustainable jeans brands with respect to environmental features.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
- 

GC2 The post from *kasidenim* has so much information that I am confused about its environmental features.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
- 

GC3 When purchasing jeans from *kasidenim*, I rarely feel sufficiently informed with respect to environmental features.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
-

GC4 When purchasing jeans from *kasidenim*, I feel uncertain about its environmental features.

- ☐ Strongly disagree (1)
- ☐ Somewhat disagree (2)
- ☐ Neither agree nor disagree (3)
- ☐ Somewhat agree (4)
- ☐ Strongly agree (5)

End of Block: Green consumer confusion

---

Start of Block: Green trust

GT1 The post from *kasidenim* is a reliable source of information about the quality and performance of sustainable jeans.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
- 

GT2 I believe that *kasidenim's* environmental performance is generally dependable.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
-

GT3 I believe that *kasidenim*'s environmental claims are generally trustworthy.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
- 

GT4 I am concerned that *kasidenim* is only pretending its green image.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
- 

GT6 *Kasidenim* keeps promises and commitments for environmental protection.

- ☐ Strongly disagree (1)
- ☐ Somewhat disagree (2)
- ☐ Neither agree nor disagree (3)
- ☐ Somewhat agree (4)
- ☐ Strongly agree (5)

End of Block: Green trust

---

Start of Block: Sustainable purchase intention

Q13 I would like to buy the jeans from *kasidenim* in the future.

- ☐ Strongly disagree (1)
  - ☐ Somewhat disagree (2)
  - ☐ Neither agree nor disagree (3)
  - ☐ Somewhat agree (4)
  - ☐ Strongly agree (5)
- 

Q14 I would be willing to pay a little more for the jeans from *kasidenim*.

- ☐ Strongly disagree (1)
- ☐ Somewhat disagree (2)
- ☐ Neither agree nor disagree (3)
- ☐ Somewhat agree (4)
- ☐ Strongly agree (5)

End of Block: Sustainable purchase intention

---

Start of Block: Manipulation Check

M1 The slogan in the post you saw, primarily focused on benefits associated with:

- ☐ Others (interests or benefits of the society or environment) (1)
  - ☐ Individual Self (interests or benefits of individual self) (2)
  - ☐ I do not recall (3)
-

M2 How would you describe the information provided in the caption?

- ☐ Specific and detailed (1)
- ☐ General and vague (2)
- ☐ I do not recall (3)

End of Block: Manipulation Check

---