What's in There for Me? Impact of User-Centric Advertisement Appeals on Consumers' Emotional Responses and Sustainable Apparel Purchase Intentions

by

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Abstract

Despite urgency to protect the environment, unsustainable apparel consumption continues to damage it. Although a high environmental knowledge, awareness, or concern encourages sustainable consumption, it does not guarantee sustainable apparel consumption. The present research identified some of the most important consumer concerns (e.g., affordability, social desirability, environment protection) from the extant literature that influence sustainable apparel consumption. This research tested the efficacy of user centric advertisements (UCAs) to positively influence purchase intention for sustainable apparel by conveying the ability of sustainable apparel to satisfy consumer concerns. By conducting two independent between-subject experimental studies with millennials in the U.S., the present research tested two conceptual models grounded in the elaboration likelihood model of persuasion and multilayered model of product emotions, information-processing stage model of aesthetic experience, and appraisal theory of emotions. This research evinced (i) irrespective of involvement with environmental issues, sustainable apparel can be centrally processed when consumers' concerns for affordability, social desirability, and environment protection are incorporated into the UCAs; (ii) central processing of UCAs mediates the relationships between modalities (textual and textual with visual) and affective response toward sustainable apparel; (iii) processing of sustainable apparel through the UCAs evokes a favorable affective response and minimizes unfavorable affective responses toward sustainable apparel; (iv) favorable affective responses positively influence and unfavorable affective responses negatively influence purchase intention for sustainable apparel; (v) individual concerns in UCAs are appraised in specific ways (e.g., motive compliant, intrinsically pleasant, legitimate), evoking specific classes of emotional responses (e.g., instrumental, aesthetic, social) toward sustainable apparel; (vi) all classes of emotional responses positively influence purchase intentions for sustainable apparel; (vii)

appraisal of sustainable apparel in certain ways mediate the relationships between the concerns presented in the UCAs and specific classes of emotional responses; and (viii) appraisal of sustainable apparel in specific ways has an indirect, positive influence on purchase intention, through specific classes of emotional responses. The data were analyzed through a series of ANCOVA, MANCOVA, and structural equation modelling. Theoretical, managerial, and societal implications of the study are discussed.

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lows and highs in my life, without the support of whom the completion of my dissertation would not have been possible.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

AesEmo	Aesthetic emotions
Aff	Concern for affordability
AffBar	Appraisal of sustainable apparel as motive compliant in terms of perceived barriers toward consuming sustainable apparel affordably
AffBe	Appraisal of sustainable apparel as motive compliant in terms of perceived benefits of consuming sustainable apparel affordably
Boredom	Boredom toward sustainable apparel
Cent	Central processing
Desire	Desire for sustainable apparel
ELM	Elaboration likelihood model
Env	Involvement with environmental issues
Fash	Fashion innovativeness
InsEmo	Instrumental emotions
Leg	Appraisal of sustainable apparel as legitimate
ManAff	Manipulation check score for the concern for affordability in the UCA
ManSD	Manipulation check score for the concern for social desirability in the UCA
ManEnv	Manipulation check score for the concern for environment protection in the UCA
Man_T	Manipulation check score for textual modality in the UCA
Man_TV	Manipulation check score for textual with visual modality in the UCA
Man_V	Manipulation check score for visual modality in the UCA
M_A	Mean of the item measuring the perceived concern for affordability in the UCA

M_E	Mean of the item measuring the perceived concern for environment protection in the UCA
M_{SD}	Mean of the item measuring the perceived concern for social desirability in the UCA
M_T	Mean of the item measuring the perceived textual information in the UCA
M_{TV}	Mean of the item measuring the perceived visual and textual information in the UCA
M_V	Mean of the item measuring the perceived visual information in the UCA
NFC	Need for cognition
Peri1	Peripheral processing on the basis of attractiveness
Peri2	Peripheral processing in terms of effortless processing
PI	Purchase intention for sustainable apparel
Pleasant	Appraisal of sustainable apparel as intrinsically pleasant
SAC	Sustainable apparel consumption
SocEmo	Social emotions
UCA	User-centric advertisement

Chapter 1: Introduction

Background and Setting

The apparel industry is one of the leading contributors of negative environmental impacts. To make one organic (i.e., sustainable) polo shirt, Patagonia needs 2,700 liters of water (i.e., about 900 people's minimum daily need for water), generating 21 pounds of carbon dioxide (30 times the weight of the polo shirt), and other waste (three times the weight of the polo shirt) (Chouinard & Stanley, 2012). This eye opener example indicates that if sustainable apparel can have such a negative impact on the environment, how damaging can non-sustainable apparel be for the environment. In 2016, the apparel industry generated 45.48% of revenue in the global market for synthetic (i.e., environmentally unfriendly) fibers (Grand View Research, 2018). In 2017, 35% of the microplastics generated from the apparel industry entered the world's oceans (Science X, 2018).

Despite the urgency for protecting the environment, unsustainable apparel consumption prevails (Chow, 2019). In the present study sustainable apparel is referred to as apparel that is environmentally friendly and ethically made. There are several barriers to sustainable apparel consumption (SAC). For example, sustainable products are perceived as expensive (Ramirez, 2013). Sustainable apparel is more expensive than its non-sustainable alternatives, thereby making it difficult for price sensitive consumers to consume sustainable apparel (Harris et al., 2016). Conversely, apparel made from synthetic fibers can be cheap, which attracts price sensitive consumers (Chow, 2019). Therefore, affordability is an important concern for consumers that could influence SAC. Furthermore, while recycling/reusing apparel aids in sustainability, consumers often anticipate or experience social disapproval for buying or wearing recycled/used apparel (McNeill & Moore, 2015). Also, sustainable apparel is perceived as limited in styles and a deterrent to self-expression, influencing unsustainable consumption (Harris et al., 2016; McNeill & Moore, 2015).

Because presenting oneself as attractive and fashionable in the social setting seems a part of gaining social approval, apparel consumption for style and self-expression is an important concern for consumers in terms of social desirability. Therefore, social desirability seems an important concern for consumers that could influence SAC, too. In summary, it seems that sustainable apparel, that is both affordable and effective in projecting oneself as socially desirable (e.g., through style and self-expression), could result in positive appraisal of SAC, thereby evoking positive emotional responses among consumers and potentially encouraging SAC.

Consumers may also engage in sustainable consumption when they have high environmental concerns, higher affordability, or desire to project their environmentally/ socially/ ethically responsible image to others (Becker et al., 2014; Bezençon & Etemad-Sajadi, 2015; Onwezen et al., 2014). These studies suggest certain consumers' concerns (e.g., environmental protection, ethical consumption of apparel, projecting ethical images to others) may positively influence the favorable appraisal of sustainable consumption. Therefore, it could be implied that if sustainable apparel could protect the environment, aid in presenting oneself as socially desirable, and be offered at an affordable price, consumers could positively appraise sustainable apparel. Such positive appraisal, in turn, could evoke positive emotional responses toward sustainable apparel and potentially increase SAC.

Overall, it appears that unless consumers find sustainable apparel capable of fulfilling their concerns (e.g., affordability, social desirability, environment protection), they may not consume it. Testa et al. (2018) contended that sustainable purchase intentions improve when consumers are convinced why they should consume sustainably rather than forcing them to do so. How can consumers be convinced to consume sustainably? Font et al. (2018) suggested user-centric advertisements (UCAs) evincing consumers' benefits, instead of just environmental benefits, could

encourage consumers' thoughtful elaborations on sustainable consumption and sustainable behaviors. In the present study, SAC is conceptualized in terms of purchase intentions for sustainable apparel.

Problem Statement

Despite the huge negative impact of unsustainable apparel consumption on the environment, there is a dearth of literature in terms of which factors influence SAC. More importantly, despite the obvious significance of consumers' concerns (e.g., affordability, social desirability, and environment protection) on SAC, there exists a literature gap in how these concerns can be leveraged by the apparel brands to encourage SAC. Currently, advertisements used by leading sustainable apparel brands either primarily focus on just protecting the environment or fail to holistically capture the other aforementioned consumer concerns.

For example, Patagonia, Reformation, TenTree, H&M, Nudie Jeans, and several other sustainable apparel brands have incorporated sustainability appeals in their advertisements (see Appendix A). However, these appeals primarily focus on cues related to environment protection rather than consumers' concerns for apparel consumption. For example, the advertisement appeals for Patagonia, Reformation, and TenTree fail to project how sustainable apparel could meet consumers' concerns for affordability, style, and self-expression; H&M fails to address how price-sensitive consumers may consume such apparel; and Nudie Jeans fails to address how sustainable apparel could meet the concerns for style and self-expression. Therefore, these advertisements seem to fail in comprehensively capturing consumers' concerns for apparel consumption and convincing consumers about sustainable apparel consumption. The present research contends that this could be especially true when consumers have low involvement with environmental issues and environmental appeals become irrelevant.

Looking into these issues, several questions arise, especially when affective factors highly influence intentions for sustainable consumption (Antonetti & Maklan, 2014): Does consumers' level of involvement with environmental issues influence how they process advertisements for sustainable apparel? Could there be a UCA for sustainable apparel that can evoke positive, affective responses toward and purchase intentions for sustainable apparel, even when consumers' involvement with environmental issues is low? How will this UCA appeal be processed when presented in different message modalities (textual vs. visual vs. textual with visual)? How can this processing evoke affective responses toward sustainable apparel? Which modality of the UCAs will be most effective in evoking positive affective responses toward and purchase intentions for sustainable apparel? There exists a literature gap in the aforementioned questions that needs filling. The first part of the present research (i.e., Study 1) addressed these research questions.

Furthermore, even though extant literature indicates affective factors play a greater role in influencing sustainable purchase intentions than logical reasoning (Antonetti & Maklan, 2014), it does not explain how the appraisal (positive or negative) of SAC evokes a specific class of emotional responses (e.g., instrumental, aesthetic, social) among consumers. To the best of my knowledge, no research exists on how certain advertisements' appeal may influence the appraisal process and, in turn, how this appraisal could predict sustainable apparel purchase intentions. Several researchers have indicated how certain appraisal processes evoke certain kinds of emotions and how different kinds of emotions differently influence individuals' behaviors or intentions (Desmet, 2003; Leder et al., 2004; Silvia, 2013). However, to the best of my knowledge, no research demonstrates how specific ways of appraising sustainable apparel may evoke specific emotions and how these specific emotions can positively influence SAC. Therefore, this study fills these important gaps in the literature. Also, it is important to identify which advertisement appeal

concerns (affordability vs. social desirability vs. environment) are most effective in translating to higher positive purchase intentions for sustainable apparel so that concerned sustainable apparel brands can customize their advertisement appeals accordingly. These gaps in the literature are filled by the second part of the present research (i.e., Study 2).

Purpose Statement

To address the aforementioned research questions and literature gaps, two experiments were conducted for the present research. Study 1 investigated the efficacy of a UCA appeal that strongly focused on consumers' concerns for apparel consumption (e.g., affordability, style, and self-expression) and had a hint of environmental protection, in fostering positive affective responses toward and purchase intentions for sustainable apparel. The rationale behind identifying this appeal was due to its persuasive potential to show that sustainable apparel could effectively satisfy consumers' apparel consumption concerns, while protecting the environment along the way. Also, as mentioned previously, because no sustainable apparel brand has holistically incorporated all three major consumer concerns (i.e., affordability, social desirability, and environment protection) in its advertisements, the present study empirically tested the efficacy of this UCA appeal, capturing all three consumer concerns in a single advertisement.

Based on the theoretical framework of Elaboration Likelihood Model of Persuasion (ELM; Cacioppo & Petty, 1984), Study 1 developed a conceptual model proposing how the described advertisement appeal presented through different modalities (textual vs. visual vs. textual with visual) could be processed by consumers with varying levels of involvement (high vs. low) with environmental issues; how this processing might evoke affective responses toward sustainable apparel; and how these affective responses may translate into purchase intentions for sustainable apparel. Therefore, the specific objectives of Study 1 were:

- To examine if consumers' involvement with environmental issues (high vs. low) moderates the relationship between the UCA appeal presented through different modalities (textual vs. visual vs. textual with visual) and routes of persuasion.
- To investigate the relationship between routes of persuasion and affective responses toward sustainable apparel.
- To examine if routes of persuasion mediate the relationships between message modalities and affective responses toward sustainable apparel.
- To understand the relationship between affective responses toward and purchase intentions for sustainable apparel.
- To examine the relationship between advertisement appeal presented through different modalities and purchase intentions for sustainable apparel.

The purpose of Study 2 was to understand how individual advertisement appeals related to SAC (affordability vs. social desirability vs. environment protection) may influence the way consumers appraise sustainable apparel, experience specific classes of emotional responses (e.g., instrumental, aesthetic, social), and, in turn, how these emotional responses may influence sustainable apparel purchase intentions. In contrast to Study 1, the three consumer concerns were tested as separate appeals through separate UCAs in Study 2. The rationale behind separating these three concerns rather than testing them holistically in a single advertisement appeal was to examine the differential effects of each concern to influence specific kinds of appraisal and emotional responses. Study 2 proposed another conceptual model based on the multilayered model of product emotions (Desmet, 2003; Figure 1), the information-processing stage model of aesthetic experience (Leder et al., 2004), and the appraisal theory of emotions (Silvia, 2013).

Specifically, the proposed conceptual model explicated how consumer concerns (i.e., affordability, social desirability, and environment protection) could be appraised as motive compliant, intrinsically pleasant, and legitimate, thereby respectively evoking instrumental, aesthetic, and social emotions. The rationale behind identifying affordability, social desirability, and environment protection as the three concerns for the advertisement appeals in the present study was due to their significance in the context of sustainable consumption, as indicated and implied by numerous studies (Becker et al., 2014; Bezençon et al., 2015; Harris et al., 2016; McNeill & Moore, 2015; Onwezen et al., 2014).

Extending Study 1, where the concern for social desirability was conceptualized in terms of sustainable apparel's ability to aid self-expression and style, Study 2 conceptualized social desirability in terms of individuals' concerns for presenting themselves as ethical in the social setting through sustainable apparel consumption. This was done to capture the different nuances of concern for social desirability and enhance the external validity of the findings. Therefore, the specific objectives for Study 2 were:

- To investigate the main effects of the concerns in the advertisement appeals (affordability vs. social desirability vs. environment protection) on consumers' appraisal of sustainable apparel.
- To understand the influence of consumers' appraisals of sustainable apparel on specific classes of emotional responses.
- To investigate whether the appraisal of sustainable apparel mediates the relationship between advertisement concerns and specific classes of consumers' emotional responses.
- To examine the influence of specific classes of consumers' emotional responses towards sustainable apparel on their purchase intentions for sustainable apparel.

- To understand the direct effect of the concerns in the UCAs on purchase intentions for sustainable apparel.

Significance of the Study

Findings of the present research have many direct marketing implications. Specifically, findings from these studies inform the efficacy of the described UCA appeals to evoke positive affective responses toward and purchase intentions for sustainable apparel, even when consumers' level of involvement with environmental issues is low. Also, findings from the present studies should help marketers use appropriate advertisement appeals and modalities to facilitate the potential for evoking desired classes of emotional response that may lead to sustainable apparel purchase intention. Based on these findings, sustainable apparel brands could target a wider market with varying levels of involvement with environmental issues and encourage sustainable apparel purchase intentions.

In terms of theoretical contributions, the present study fills important gaps in the literature by providing deeper insights on consumers' processing of UCAs for sustainable apparel and its relationship with consumers' affective response toward and purchase intentions for sustainable apparel. These findings fill significant gaps in the literature by explicating the causal relationships between advertisement appeals, appraisal of sustainable apparel, specific classes of emotional responses toward sustainable apparel due to the exposure to advertisement appeals, and purchase intentions for sustainable apparel. These findings also contribute to the theory building of ELM, multilayered model of product emotions, information-processing stage model of aesthetic experiences, and appraisal theory of emotions of persuasion in the context of UCAs for encouraging SAC. In terms of the societal significance, the findings form the steppingstone in finding ways to

change consumers' perception that they do not need to sacrifice their needs for affordability, style, and self-expression to protect the environment.

Conceptual Definitions of Constructs

- **Advertisement appeals:** "Basic characterization of the content style of an advertisement" (Padgett & Allen, 1997, p. 57). In Study 1, advertisement appeals were operationalized in terms of consumer concerns for SAC (i.e., affordability, social desirability, and environment protection), displayed through three message modalities (i.e., textual vs. visual vs. textual with visual). In Study 2, the advertisement appeal was operationalized in terms of an overarching theme reflecting consumers' concerns for affordability, style, self-expression, and environment displayed through two message modalities (i.e., textual vs. textual with visual), forming six orthogonal categories of advertisements.
- **Advertisement message modality:** Advertisement message modality refers to textual, visual, and textual with visual cues through which an advertisement appeal is communicated. In the present studies, advertisement message modality referred to textual, visual, and textual with visual cues through which the UCA appeals for sustainable apparel were communicated.
- **Affective response:** Affective response refers to expressive-emotional responses (Bartel, 1992). Batra and Holbrook (1990) described emotional responses related to advertisement evaluations in certain affect types, such as, activation, boredom, desire, restful, social affection, gratitude, and surgency. In Study 1, affective response toward sustainable apparel was examined in terms of favorable (e.g., desire) and unfavorable (e.g., boredom) affective responses. In Study 2, affective response was further narrowed in terms of specific classes of emotional responses. Emotional response is defined as the intentional acute affective state

formed for a short duration of time, after an individual is exposed to a stimulus (Desmet, 2003, p. 7). In Study 2, emotional response was operationalized in terms of the three classes of emotions: instrumental (i.e., satisfaction, contended), aesthetic (e.g., desire, yearning), and social (i.e., admiration, impressed), after individuals are exposed to advertisement appeals related to SAC.

- **Appraisal of SAC:** This is defined as a "non-intellectual automatic evaluation of the significance of a stimulus for one's personal well-being" (Desmet, 2003, p. 6) when an individual is exposed to a stimulus related to SAC. In the present studies, appraisal of SAC was operationalized as the motive compliance toward a goal for buying within budget due to the concern for affordability; intrinsic pleasantness from the attitude for behaving in a socially desirable way due to the concern for social desirability; and legitimacy for intentions for pro-environmental behavior due to the concern toward environment.
- **Involvement with environmental issues:** "Issue-involvement is the degree to which…a topic is a personally relevant issue" (Reynold, 1997, p. 270). In Study 1, involvement with environmental issues was defined as the degree to which an individual finds the need for environmental protection personally relevant.
- **Purchase intention for sustainable apparel**: This is defined as "an individual's conscious plan to make an effort to purchase" (Spears & Singh, 2004, p. 56) a sustainable apparel.
- **Routes of persuasion**: These routes refer to the extent individuals engage in issue-relevant and thoughtful evaluations about an issue/object. When individuals are highly (vs. less) involved with a particular object/issue, they engage in extensive (vs. superficial) evaluations about the object/issue, thereby forming an attitude toward the object/issue through central (vs. peripheral) route of persuasion (Cacioppo & Petty, 1984; Petty & Cacioppo, 1986).

- **Sustainable apparel**: Sustainable apparel refers to apparel that is environmentally friendly and ethically and locally manufactured, made from recycled/reused/biodegradable/locally sourced materials (Harris et al., 2016; Joy et al., 2012; McNeill & Moore, 2015; O'Rourke & Ringer, 2016; Ramirez, 2013). In the present study sustainable apparel was conceptualized as apparel which is environmentally friendly and ethically made.

Chapter 2: Literature Review and Research Hypotheses

Theoretical Framework

Study 1: Elaboration likelihood model (ELM) of persuasion. ELM posits that individuals form or change attitude toward an issue/object through two routes of persuasion—central and peripheral. Rather than being mutually exclusive, these routes form two extreme points of a continuum, indicating the degree to which issue-relevant thinking precedes attitude formation (Cacioppo & Petty, 1984; Petty & Cacioppo, 1986).

The central route pertains to careful issue-relevant evaluations of the object when individuals have a high likelihood for elaboration (Cacioppo & Petty, 1984; Petty & Cacioppo, 1986). Such meticulous evaluations form enduring attitudes about the issue evaluated (Bitner & Obermiller, 1985; Cacioppo & Petty, 1984). Conversely, when the elaboration likelihood is low, individuals evaluate issues through peripheral routes of persuasion. In this way, individuals form attitudes toward an issue by accepting or rejecting negative (e.g., self-discrepancy) or positive (e.g., attractiveness) heuristic cues (O'Keefe, 2008). Such superficial evaluations form temporary attitudes toward the issue (Bitner & Obermiller, 1985; Cacioppo & Petty, 1984).

A peripherally formed attitude can be modified centrally when an individual gains a high likelihood for elaboration due to high motivation, ability, or need for cognition. A number of situational and individual difference variables influence the routes of persuasion for an individual (Cacioppo & Petty, 1986). In fact, the same cue can be evaluated centrally or peripherally, depending upon the individual's involvement with the issue or the consequences of the evaluations (Bitner & Obermiller, 1985). Often, when elaboration likelihood is high, but central cues are absent, self-generated issue-relevant thoughts can form attitude centrally. However, in the absence of cues, attitudes are formed peripherally (Bitner & Obermiller, 1985).

Based on this discussion, Study 1 identified the specific routes of persuasion likely used by an individual, while processing a UCA appeal displayed through different message modalities, as a function of their varying levels of involvement with environmental issues. As such, Study 1 investigated how a UCA appeal capturing all three major consumer concerns (i.e., affordability, social desirability, and environment protection) in sustainable apparel consumption is processed by consumers with varying levels of involvement with environmental issues, when the advertisement appeal is exposed through textual, visual, and textual with visual modalities. Also, given the significance of affective factors that influence sustainable consumption (Antonetti & Maklan, 2014; Chan & Yam, 1995), attitudinal response toward sustainable apparel in Study 1 was conceptualized in terms of the affective response toward sustainable apparel.

Specifically, attitude is not formed just by cognitive but affective evaluations as well (Allen et al., 2005). Affective response toward an issue could be evoked through both routes of persuasion (Bitner & Obermiller, 1985; Morris et al., 2005). Argument valence (i.e., the emotional tone of a message) is suggested as associated with low elaboration likelihood and peripheral routes of persuasion (Areni & Lutz, 1988). However, affective evaluations may take place through central routes of persuasion as well (Bitner & Obermiller, 1985; Morris et al., 2005). For example, argument strength (i.e., cogency of a message) is suggested to be more associated with high cognitive elaborations and central routes of persuasion (Wilson, 2007). As such, a positive (vs. negative) affective response is formed when the arguments are found (vs. not found) warranted after a thorough scrutiny of issue-relevant arguments. Such positive (vs. negative) affective responses may lead to pro-attitudinal (vs. counter-attitudinal) states (Kang et al., 2006). Based on this discussion, Study 1 investigated how affective response toward sustainable apparel is evoked

through different routes of persuasion and how the affective response may translate into purchase intentions for sustainable apparel.

Therefore, Study 1 applied ELM to explain the mechanism behind hypothesizing how (i) the UCAs displayed through different modalities of messages (textual vs. visual vs. textual with visual) are processed through different routes of persuasion; (ii) affective response toward sustainable apparel is formed through that processing; (iii) routes of persuasion mediates the relationship between message modalities and affective response; and (iv) affective response toward sustainable apparel or message modalities may translate into purchase intentions for sustainable apparel. Given the importance of issue-involvement in influencing routes of persuasion, Study 1 examined how the UCAs in different modalities will be processed as a function of varying levels of involvement (high vs. low) with environmental issues.

Study 2: Multilayered model of product emotions, information-processing stage model, and appraisal theory of emotions. The objectives of Study 2 involve understanding the effects of individual concerns in the UCAs (affordability vs. social desirability vs. environment protection) and modalities (textual vs. visual vs. textual with visual) on consumers' appraisal of, emotional response toward, and purchase intention for sustainable apparel. Therefore, Study 2 integrated three theories in cognitive and emotional appraisals in aesthetic experience. The identified theories for Study 2 were multilayered model of product emotions (Desmet 2003; see Figure 1), information-processing stage model of aesthetic experience (Leder et al., 2004), and appraisal theory of emotions (Silvia, 2013).

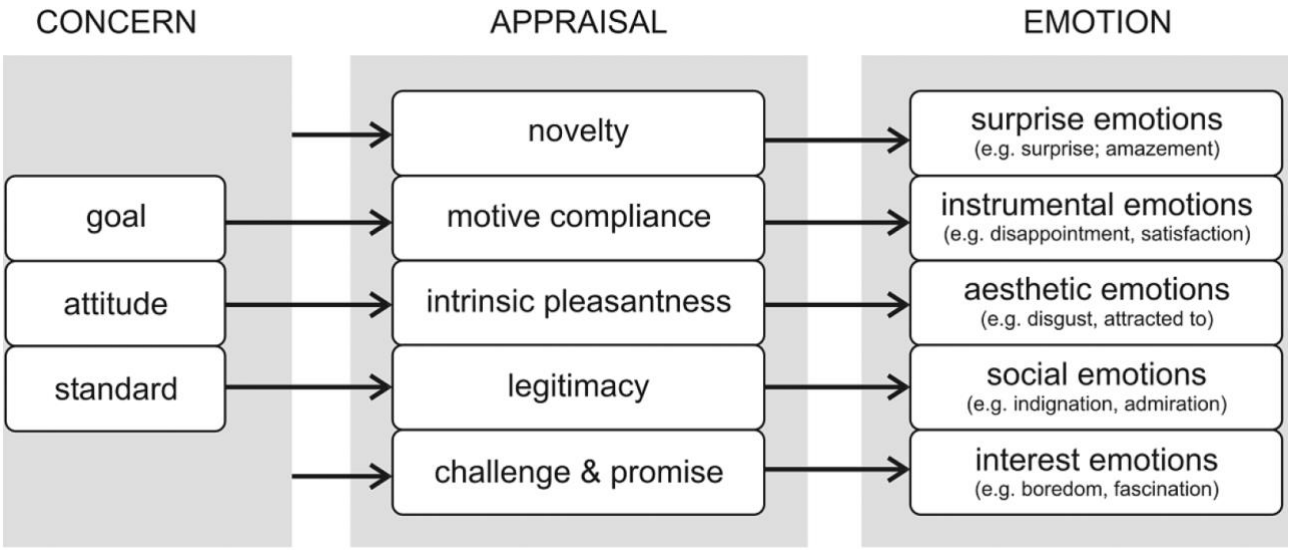

Figure 1. Multilayered model of product emotions (Desmet, 2003). Figure reproduced with author's permission.

Desmet's (2003) model indicates how an individual appraises an object to be beneficial or harmful by evaluating whether or not the object is congruent to his/her specific concerns. As such, when an object aids in meeting a goal, behaves in a pro-attitudinal manner, and acts according to set standards, the object is appraised as motive compliant, intrinsically pleasant, and legitimate, respectively. Desmet (2003) further indicated that such appraisals decide if the individual appraising the object will experience any aesthetic emotion and if he/she does, which class of emotions (e.g., surprise, instrumental, aesthetic, social, and interest) will be evoked. Since the objectives of the present study involved understanding how individuals may evoke certain emotions after appraising sustainable apparel from being exposed to UCAs, Desmet's (2003) model is critical for the study. Specifically, Desmet's (2003) model is used to explicate how sustainable apparel can be appraised after being exposed to specific advertisement appeals incorporating each of the major consumer concerns for SAC and how the appraisal may translate into certain classes of emotions. Therefore, Study 2 drew primarily from the multilayered model of product emotions (Desmet,

2003) to explain the mechanism behind developing the hypotheses on the relationships between advertisement appeals, appraisal of, and emotional response toward sustainable apparel.

The theoretical frameworks proposed by Leder et al. (2004) and Silvia (2013) were used to strengthen the conceptualization of the hypotheses based on Desmet's (2003) model in the purview of in-depth cognitive appraisals of aesthetic stimuli preceding final emotional responses experienced by an individual. Specifically, while Desmet's (2003) model was employed to hypothesize how sustainable apparel can be appraised as being motive compliant, intrinsically pleasant, and legitimate after being exposed to specific UCAs incorporating either of the three major consumer concerns for SAC, Leder et al.'s (2004) model was used to explicate the underlying nature and structure of cognitive appraisal of sustainable apparel in evoking automatic and deliberative emotions. As such, while Desmet's (2003) model was employed to hypothesize how sustainable apparel appraised as motive compliant, intrinsically pleasant, and legitimate could evoke final emotional responses as instrumental, aesthetic, and social, respectively, Leder et al.'s (2004) model was used to explicate how affective evaluations of sustainable apparel may evolve through the successive cognitive processing stages, leading to the final emotional response evoked toward the sustainable apparel. Silvia's (2013) model was used to further support the underlying cognitive processing in influencing the nature of emotional responses as a function of individual's coping potential (i.e., the ability and resources to comprehend the meaning of an aesthetic stimulus). The next section provides a detailed discussion about the integration of these models proposed by Desmet (2003), Leder et al., (2004), and Silvia (2013) in the context of Study 2.

Automatic emotions as a function of changing nature and structure of cognitive processing. Automatic emotions are evoked right after an individual is exposed to an aesthetic stimulus, precluding the need for extensive cognitive processing of the stimulus. Conversely,

deliberate emotions are evoked through thoughtful evaluations of the aesthetic stimulus (Leder et al., 2004). Leder et al. (2004) indicated five stages in the cognitive processing of aesthetic stimulus evoking automatic and deliberate emotions. The initial two stages—perceptual analyses and implicit memory integration—pertain to automatic cognitive evaluation. The next two stages—explicit classification and cognitive mastering—pertain to deliberate cognitive evaluation, forming aesthetic judgement and emotion in the fifth stage-evaluation. The model contends that before automatic or deliberate emotions are evoked, aesthetic stimuli are pre-classified, based on contextual factors; the pre-classification in turn evokes an initial emotional state (Leder et al., 2004). In the context of Study 2, assuming the sustainable advertisements will be primarily shown by sustainable apparel brands (thereby providing a context of sustainability), it was expected these advertisements were pre-classified as sustainable apparel advertisements.

Pre-classification of appeals and initial emotional state. Leder et al. (2004) further suggested an individual's prevalent emotional state influences how he/she will engage in the aesthetic experience and update his/her emotional state. Specifically, when the emotional state is positive (vs. negative), the aesthetic stimulus is appraised holistically (vs. analytically). When individuals find (vs. do not find) an object congruent to their goals and concerns, they evoke a positive (vs. negative) emotional response (Desmet, 2003; Kreibig et al., 2012; Silvia, 2013). Therefore, in the context of Study 2, it is expected that even before entering the cognitive processing stages, individuals may form an initial positive (vs. negative) emotional state when their own goals/concerns seem congruent with the pre-classified sustainable advertisements, translating into a holistic (vs. analytical) processing.

Perceptual analyses of advertisement appeal and automatic emotions. After pre-classifying the stimulus, individuals engage in automatic cognitive evaluation and perceptually analyze

aesthetic stimuli, based on complexity, contrast, symmetry, order, and grouping (Leder et al., 2004). Since basic occipital visual processing is primarily involved at this stage (Leder et al., 2004), in the context of Study 2, individuals may find it less complex to appraise advertisement appeals exposed through visual modality, relative to advertisement appeals with only textual or textual with visual modalities. Individuals may automatically group and order the available visual cues for affordability, social desirability, and environment protection in an advertisement appeal to further update their automatic emotions by effortlessly relating to how these cues appear to match with their goals/concerns. Since sustainable advertisement appeals generally focus on cues primarily related to sustainability (e.g., environment protection), rather than consumers' concerns (e.g., affordability, social desirability), UCAs primarily focusing on consumers' concerns may stand out from other sustainable apparel advertisements, due to this contrasting nature of appeals. Such perceptual analyses should further update automatic emotions as positive among those consumers who have found the advertisement appeal as seemingly congruent to their own goals/concerns. These can explain the underlying initial automatic cognitive processing of aesthetic stimuli to support Desmet's (2003) model in how individuals may find congruence between aesthetic stimuli (e.g., advertisement appeal) and their own concerns (e.g., affordability, social desirability, and environment protection).

Implicit memory integration of advertisement appeals and automatic emotions. Perceptual analyses lead to implicit memory integration, where individuals further appraise the aesthetic stimuli, based upon familiarity (e.g., feeling of knowing an object through repeated exposures), prototypicality (i.e., how an object can represent a class of objects), and peak-shifts (i.e., how an object endues certain exaggerated properties of familiar objects). As such, previous experiences gained through domain-specific expertise, declarative knowledge, interest, and personal taste

influences the appraisal process (Leder et al., 2004). Given this stage still does not involve conscious processing (Leder et al., 2004), previous experiences could be utilized as a coping potential (Silvia, 2013) to process the familiarity, prototypicality, and peak-shifts in an aesthetic stimulus.

In the context of Study 2, UCAs could be found relatable with the prototypical sustainable advertisements by the virtue of certain visual cues, such as, green/brown color, leaves/parts of plants, etc., and textual cues, such as, key words/phrases reflecting sustainability (e.g., sustainable, green, ethical, environmentally friendly). These are some of the common cues already used by sustainable apparel brands. Hence, it is expected the advertisement appeals used in Study 2 will be automatically processed as familiar. As prototypicality and familiarity aids in quick assessment of aesthetic stimuli, emotional states could be further updated positively (Leder et al., 2004; Silvia, 2013). Therefore, the advertisement appeals in Study 2 should update emotional states positively.

Furthermore, Silvia (2013) suggested when an object has high novelty, unfamiliarity, and complexity, individuals will evoke surprise emotions. Given the UCAs used in Study 2 strongly emphasize consumers' concerns rather than sustainability only, it is expected individuals will find the appeals as novel and unfamiliar, too. Given individuals at this stage superficially process aesthetic stimuli, it is expected that advertisement appeals, especially the ones exposed through textual and textual with visual modality, will be appraised as complex. Therefore, the advertisement appeals in Study 2 should evoke surprise emotions. This supports the underlying mechanism of evoking surprise emotions in Desmet's (2003) model, which describes surprise as a one-time emotion evoked when an individual is exposed to a sudden, unfamiliar, and novel aesthetic stimulus, that can unexpectedly match with any of their concerns (e.g., meeting a goal, behaving in a pro-attitudinal manner, or acting according to set standards). Therefore, while the prototypicality

and familiarity of the advertisement appeals in the present study could be related with sustainable apparel advertisements, updating emotions positively, the novelty, unfamiliarity, and complexity of the appeals could aid individuals by evoking surprise emotions toward sustainable apparel by unexpectedly matching their personal concerns with the advertisement appeals superficially.

Furthermore, Silvia (2013) suggested the high coping potential of an individual coupled with high novelty, unfamiliarity, and complexity could modify surprise emotions to interest emotions. Drawing from this model for Study 2, it could be implied that individuals with high coping potential (e.g., having prior experience with sustainability-related advertisements/products/ knowledge) coupled with high novelty, complexity, and unfamiliarity in the UCAs will evoke interest toward the advertisement appeals exposed through textual or textual with visual modality. High coping potential coupled with UCAs exposed through visual modality should evoke interest primarily due to novelty and unfamiliarity.

Additionally, given advertisement appeals strongly emphasize consumers' concerns, individuals may find their goals/concerns congruent with these appeals, due to peak-shift effects (e.g., through some exaggerated and highlighted cues on possibilities for fulfilling consumers' concerns) without adding deliberate efforts as described in Leder et al.'s (2004) model. Such automatic cognitive processing should further update individuals' automatic emotions as more positive, motivating them to enter in the deliberate cognitive processing stages (Leder et al., 2004; Silvia, 2012). These further explain the underlying mechanism for development in automatic cognitive processing and its transition to deliberate cognitive processing; it supports Desmet's (2003) model, which posits when individuals see challenge in understanding the meaning of an aesthetic stimulus and find the object as promising in meeting their concerns, they evoke interest emotion by the virtue of a "stimulus hunger" (Desmet, 2003, p. 12) that motivates them to appraise

the stimulus further. Therefore, this alludes to the automatic nature of surprise and interest emotional classes described in Desmet's (2003) model which generate the initial motivation for appraising stimulus further through deliberate cognitive processing to evoke concern-appraisal specific deliberate emotions.

Deliberate emotions a function of changing nature and structure of cognitive processing.

Explicit classification of advertisement appeals and deliberate emotions. Following implicit memory integration, individuals motivated to further process an aesthetic stimulus through extensive cognitive deliberations enter the stage of explicit classification. At this stage, individuals scrutinize the style and content of the stimulus, based on their domain-specific expertise, declarative knowledge, interest, and personal taste, often shaped by social interaction discourse (Leder et al., 2004). In the context of Study 2, sustainability-related knowledge, expertise, and interest are expected to be utilized to scrutinize the advertisement appeals to see the veracity and strength of message arguments presented through different advertisement modalities. Given affordability, social desirability, and environment protection are some of the important concerns among consumers influencing sustainable apparel consumption (Becker et al., 2014; Bezençon & Etemad-Sajadi, 2015; Onwezen et al., 2014), it is expected that even when sustainability-related knowledge, expertise, and interest are low, individuals could scrutinize the advertisement appeals in terms of the cues for affordability, social desirability, and environment protection in the advertisement appeals. Therefore, during this stage, it is expected that individuals will explicitly classify the UCA appeals as sustainable that convey consumers' concerns for affordability, social desirability, and environment protection. Such classification is expected to communicate sustainable apparel consumption does not necessarily demand consumers sacrifice their needs for meeting their concerns. Therefore, such appraisal is expected to further update individuals' emotional states as

positive, thereby motivating them for deeper cognitive appraisal of the advertisement appeals through cognitive mastering.

Cognitive mastering of advertisement appeals and deliberate emotions. At this stage of cognitive mastering, individuals engage in deeper cognitive appraisal of the aesthetic stimulus by engaging in stimulus-specific and self-related interpretations. As such, individuals continue processing the stimulus unless they are successful in comprehending the meaning of the stimulus (Leder et al., 2004). Silvia (2013) suggested high coping potential aids in comprehensibility of a stimulus. As individuals at the cognitive mastering stage extensively utilize their domain-specific expertise and knowledge along with personal interest and taste, these could be used as critical resources for coping potential. As Desmet (2003) described concern as a point of reference, the explicit classification of advertisement appeals as sustainable, conveying consumers' concerns could be further appraised based on an individual's salient concerns for affordability, social desirability, and environment protection. As such, a high coping potential of an individual will aid in goal-oriented appraisal of stimulus, enhancing the comprehensibility of the stimulus (Silvia, 2013). Therefore, drawing from Leder et al.'s (2004) model that the progress of stimulus process at this stage is contingent upon the success of comprehending the meaning of stimulus, it could be implied when individuals find their own specific concerns congruent with the meanings surfaced from the advertisement appeals, the comprehensibility of appeals increases. Such success in comprehending the meaning of the stimulus will further update individuals' emotional states positively (Leder et al., 2004; Silvia, 2013) and lead to a final positive evaluation of the aesthetic stimulus (e.g., positive aesthetic judgment and emotions) (Leder et el., 2004). These explain the underlying mechanism of deliberate cognitive processing on how an individual may appraise certain concerns evoking positive emotions. Therefore, these support Desmet's (2003) model that it is not

the stimulus per se, but the appraisal of the meaning of the stimulus is responsible for evoking emotions.

Furthermore, since individuals at this stage have already appraised the aesthetic stimulus extensively and comprehended its meaning, it could be suggested they will not find the stimulus as novel, complex, and unfamiliar as they found in the automatic processing stages. Therefore, while interest emotion was evoked in the automatic processing stages, due to novelty, complexity, and unfamiliarity of the stimulus, at this stage of cognitive mastering, interest emotions could be translated into different forms of deliberate emotions (Leder et el., 2004). Desmet's (2003) model is crucial to identify the plausible class of deliberate emotions evoked as a function of specific concern-appraisal relationships.

Background Literature

Message modalities and routes of persuasion in advertisements. In the present study, message modality refers to textual, visual, and textual with visual cues through which the advertisement appeal for sustainable apparel is communicated. Drawing from ELM of persuasion (Petty & Cacioppo, 1984), in high issue-involvement conditions, textual and dense information in advertisements is processed centrally (Walker et al., 2008). As such, an individual is highly motivated and/or able to scrutinize the argument strength in the message to evaluate, when the information provided is warranted (Wilson, 2007). Conversely, in low issue-involvement conditions, the individual lacks the motivation and/or the ability to process dense textual information and forms attitude through peripheral cues, such as images (Walker et al., 2008), voice (Braverman, 2008), or overall attractiveness of the message (Jones et al., 2006). As such, attitude is formed automatically and effortlessly (Gelinas-Chebat & Chebat, 1992). Central processing may take place when both textual and visual cues are present together (SanJose-Cabezudo et al., 2009).

However, under high-involvement conditions, when a weak message is coupled with strong peripheral cues (e.g., rhetorical, visual), a negative attitude may be formed (Chou et al., 2011; Nelson & Garst, 2005). Font et al. (2018) contended that advertisements with a central focus on consumers' benefits and peripheral cues for sustainability can engender sustainable tourism. Based on this discussion, Study 1 investigated how consumers may process a UCA appeal for sustainable apparel communicated through textual, visual, and textual with visual modalities.

Advertisement appeals. Marketers use numerous ways to communicate the sustainable aspects of their offered products, such as green labelling in packaging with green claims and environmental impact (Cho, 2014; Magnier et al., 2016) and sustainable advertisements (Cummins et al., 2014). However, the perception of sustainable advertisements is contingent upon the messages communicated through sustainable appeals (Cummins et al., 2014). In-store appeals in the retail space décor (Brengman et al., 2012) with green vegetation and in-store lighting (Barli et al., 2012) also influence the time spent in the store and purchase intention. Yusof et al. (2011) indicated when consumers find the green retail environment congruent to their own self-image, they have high store loyalty. These indicate the importance of appropriate appeals to influence consumer response in terms of time spent in stores, purchase intentions, and store loyalty. Ha et al. (2007) suggested various advertisement appeals (e.g., visual presentations, sales, and promotional advertisements) in online (apparel) retail spaces work the same way as they would have worked in a physical retail store. Therefore, Study 1 investigated how UCA appeals displayed through a different message modality are processed by individuals with varying levels of involvement with environmental issues and how this processing evokes an affective response toward and purchase intention for sustainable apparel.

As such, this drew from ELM of persuasion (Petty & Cacioppo, 1984) to explain the mechanism how individuals with varying levels of involvement with environmental issues will engage in the process of evaluating those advertisements displayed through different modalities and form an attitude toward sustainable apparel. Based on the multilayered model of product emotions (Desmet, 2003), information-processing stage model of aesthetic experience (Leder et al., 2004), and appraisal theory of emotions (Silvia, 2013), Study 2 investigated how UCAs with three distinct consumer concerns, such as advertisement appeals, may influence appraisal of, emotional responses toward, and purchase intentions for sustainable apparel.

Involvement with environmental issues. "Issue-involvement is the degree to which … a topic is a personally relevant issue" (Reynold, 1997, p. 270). In Study 1, involvement with environmental issues is defined as the degree to which an individual finds the need for environmental protection personally relevant. Individuals having high involvement with environmental issues evaluated brands (Pantelic et al., 2016), products (Magnier & Schoormans, 2015), and their own consumption (Alles et al., 2017; Dascher et al., 2014) to assess how these may negatively impact and/or protect the environment. However, when involvement with environmental issues is low, even high environmental knowledge may not translate into pro-environmental behaviors (Magnier & Schoormans, 2015; O'Rourke & Ringer, 2016). Therefore, based on ELM of persuasion (Petty & Cacioppo, 1984), Study 1 examined whether consumers' levels of involvement with environmental issues influences the processing of a UCA appeal for sustainable apparel.

Affective response toward sustainable apparel. Affective response refers to expressive-emotional responses (Bartel, 1992). Batra and Holbrook (1990) described emotional responses related to advertisement evaluations in certain affect types, such as, activation, boredom, desire, restful, social affection, gratitude, and surgency. In Study 1, affective response toward sustainable

apparel was examined in terms of unfavorable (e.g., boredom) and favorable (e.g., desire) affective response. Affective factors influence pro-environmental behaviors more than cognitive factors (Antonetti & Maklan, 2014; Chan & Yam, 1995). While negative affective states (e.g., guilt) influences pro-environmental behaviors for compensating for unsustainable consumption, positive affective states (e.g., pride) influences pro-environmental behaviors for re-affirming the positive affective state for sustainable consumption (Antonetti & Maklan, 2014; Onwezen et al., 2014). Consumers tend to have a high positive attitude toward green advertisements, when the advertisements provide in-depth details on how consumers may contribute towards a sustainable environment (Cho, 2014). This implies when consumers have high concerns for contributing toward a sustainable environment, they will evoke a positive emotional response toward green advertisements. In similar lines, Brengman et al. (2012) suggested vegetation (e.g., foliage) in complex retail space can elicit positive emotional responses among consumers and reduce stress. However, when consumers perceive green advertisements as green gauging (i.e., deceptive advertisements having unfounded green claims to emotionally influence consumers' decisions), a negative emotional response is evoked (Ramirez, 2013). Chan and Yam (1995) suggested the verbal and actual commitment of individuals to sustainable behavior is largely guided by their affective states, rather than logical reasoning. Often, consumers would appraise sustainable apparel positively when the advertisements provide great details on how they can contribute toward sustainability through their SAC, eliciting positive anticipatory emotions (Rezvani et al., 2017). However, when exposed to sustainable ads, consumers pay more attention to aesthetic factors than utilitarian factors in forming attitudes (Huertas-Garcia et al., 2016). Since apparel is evaluated largely on the basis of aesthetics (McNeill & Moore, 2015) and aesthetically pleasing apparel is suggested to encourage sustainable apparel consumption (Harris et al., 2016), affective response seems important in the

present study to examine consumers' purchase intentions for sustainable apparel. Study 2 investigated how specific classes of the emotional responses could be evoked through each of three distinct UCA appeals (i.e., affordability vs. social desirability vs. environment protection) and if they could influence purchase intentions for sustainable apparel. Based on ELM of persuasion (Petty & Cacioppo, 1984), Study 1 investigated how central and peripheral processing of user centric advertisements may result in positive affective response toward sustainable apparel.

Appraisal and purchase intentions for sustainable apparel. Desmet (2012) suggested it is not the stimulus (or object), but the appraisal of the stimulus that evokes emotional response toward it. Therefore, it seems the appraisal of an object mediates the relationship between the effect of that object and the emotional response evoked by it. Study 2 investigates if emotional appraisal of sustainable apparel mediates the relationship between advertisement appeals and emotional responses. Purchase intentions for sustainable apparel is defined as "an individual's tendency or willingness to purchase green" apparel (Ghazali et al., 2018, p. 642). Some of the barriers for sustainable apparel consumption are perceived low quality, limited styles, and inability of such apparel for self-expression (Joy et al., 2012; McNeill & Moore, 2015). In general, sustainable products are perceived as expensive (O'Rourke & Ringer, 2016; Ramirez, 2013). Even when environmental concern is high, the need for self-expression and style wins over sustainability (Joy et al., 2012). However, a section of consumers is willing to sacrifice their needs for self-expression and style for the sake of protecting the environment. These consumers often purchase re-usable, recyclable, re-sold, durable, and organic apparel. They even engage in mix-n-match for self-expression from limited numbers of apparel, thereby reducing the need for buying more (McNeill & Moore, 2015). Therefore, Study 1 examined if positive affective response evoked after processing a UCA appeal for sustainable apparel translates into a positive purchase intention for sustainable

apparel. Furthermore, green labelling in packaging, in terms of environmental claims and environmental impact positively influence consumers' sustainable product evaluations and purchase intentions (Cho, 2014). The green color used in retail lighting and in-store spaces leads to higher purchase intentions than other colors (e.g., red and orange; Barli et al., 2012). However, Barli et al. (2012) did not address whether consumers associate the color green with sustainability or environment. Study 2 investigated how specific appraisal and response toward sustainable apparel influence purchase intentions for sustainable apparel, when exposed to certain UCA appeals.

Conceptual Models and Hypotheses

Study 1.

Relationship between message modalities for user-centric sustainable advertisement appeal, involvement with environmental issues, and routes of persuasion. Textual messages are processed centrally. This might be because comprehending such messages takes time and high issue involvement (Walker et al., 2008). High issue-involvement is associated with processing message arguments centrally, forming enduring attitudes (Cacioppo & Petty, 1984; Petty & Cacioppo, 1986). When individuals are highly involved with an issue, they elaborate extensively on informational messages (e.g., textual messages, Braverman, 2008; Whittler & Spira, 2002). Message arguments in advertisements are centrally processed (Wilson, 2007). For example, when individuals have high involvement with an issue, they engage in a thorough evaluation of the advertisement message to form enduring favorable perceptions about the advertisement (Bhutada et al., 2017). In fact, when the likelihood of message elaboration is high, salience of the central cues, such as textual informational messages, becomes high (Braverman, 2008; Lee & Ahn, 2017). Specifically, the persuasiveness of the message becomes higher when presented in a written format (Braverman, 2008; Gelinas-Chebat & Chebat, 1992). Therefore, UCAs with textual information about ways of

satisfying consumers' needs (e.g., affordability, style, self-expression, environment protection) should be processed centrally by individuals, who have high involvement with these specific needs.

In the context of sustainable consumption, consumers tend to process environmental sustainability issues through cognitive and long-term considerations (Catlin et al., 2017). In fact, when perceived consumer effectiveness is high (i.e., high involvement with environmental issues), obtaining information about environmental issues makes a better drive for environmentally friendly actions (Dascher et al., 2014). Sustainability information in the form of environmental scores (i.e., how the product has less negative impact on environment) results in lower purchase intentions among consumers (i.e., low involvement with environmental issues), unless they are already involved in sustainable consumption (i.e., high involvement with environmental issues; O'Rourke & Ringer, 2016). These further support textual messages on environmental sustainability should be processed centrally by individuals who have high involvement with environmental issues.

In the context of sustainable apparel consumption, a segment of consumers willingly sacrifices its needs (e.g., need for self-expression) for the sake of protecting the environment (McNeill & Moore, 2015). Such consumption reflects a high involvement with the environmental issues. Thus, these consumers are likely to process textual messages for sustainable apparel centrally. When product relevance is high, individuals elaborate on the message arguments centrally (Lee & Ahn, 2017). As such, it needs substantive variations in the advertisements to develop attitudes, rather than mere design modifications (Schumann et al., 1990) plausibly because strong message arguments improve cognitive message elaborations (Wilson, 2007). For example, figurative headlines improve central processing of messages, due to their strong argumentative positions (Jiang & Tao, 2012). Also, advertisements with high amount of textual information are

favored by individuals with high involvement with the issue presented in the advertisement; these individuals engage in a thorough evaluation of the advertisement message (Jones et al., 2006).

Based on the discussion above, it is expected that individuals highly involved with environmental issues would process textual messages in a UCA centrally to scrutinize the potential of the advertised apparel to protect the environment. Even though the advertisement appeal in Study 1 strongly emphasizes style, self-expression, and affordability of a sustainable apparel, individuals with high involvement with environmental issues should be able to determine that the advertisement is discussing the usage of sustainable apparel to create multiple styles and self-expression, thereby lowering the need to buy more apparel; thus, protecting the environment.

When individuals have low involvement with an issue, they do not elaborate informational messages (e.g., textual messages; Braverman, 2008). However, in the context of Study 1, individuals with low involvement with environmental issues may still process textual cues in the UCA appeal centrally, when they can see how their concerns for affordability, style, and self-expression could be met with the advertised sustainable apparel, thereby making the product relevant to them. This draws support from the cited literature that high involvement with an issue leads to central processing of a textual message. As such, given Study 1 focuses on apparel, it is expected the UCA appeal would aid individuals with low involvement in environmental issues to become involved with the message by the virtue of the cues related to affordability, style, and self-expression from sustainable apparel. In other words, because the UCA appeal captures four major consumer concerns (i.e., affordability, style, self-expression, and environment protection), it is expected that even if consumers who are not highly involved with environmental issues, they can still find the advertisement appeal self-relevant, due to the salience of the other three cues, thereby

enhancing the potential of elaborating the textual message centrally. Therefore, based on this discussion, the following hypothesis is proposed:

H1: Irrespective of individuals' involvements with environmental issues, textual cues in the user-centric sustainable advertisement appeal will increase central processing of the advertisement.

Peripheral cues in advertisements, such as visual effects, voice characteristics, and attractiveness lead to automatic, effortless elaborations among individuals with low issue-involvement (Braverman, 2008; Gelinas-Chebat & Chebat, 1992; Jones et al., 2006; Walker et al., 2008). Low issue-involvement individuals can become immersed by a story portrayed in an advertisement through peripheral cues, rather than factual information (i.e., central cue) (Braverman, 2008; Leclerc & Little, 1997). Visual cues in sustainability can induce intentions for sustainable consumption, even among children, who have low concerns about sustainability (Donovan, 2016). When product relevance is low, merely changing design elements in advertisements can influence attitude formation (Schumann et al., 1990). Therefore, in the context of Study 1, it could be implied that visual cues on UCAs could lead to peripheral processing when involvement with environmental issues is low; and thus, the elaboration likelihood is low.

Furthermore, when individuals have low-involvement with a product, self-congruency becomes a peripheral cue to form an attitude for the product compared to when individuals have high issue-involvement (Chang, 2011). Therefore, in the context of the present study, when individuals have low involvement with environmental issues, but find the visual cues of a UCA congruent to their concerns for style, self-expression, and affordability, peripheral processing of the advertisement could occur. However, individuals in Study 1, who have high involvement with environmental issues, may not process visual cues in the sustainable apparel advertisement peripherally. These individuals may elaborate further that because the same apparel will be used for

creating multiple styles, the need for buying new apparel could be reduced; thereby, protecting the environment by reducing consumption and reimagining ways of using the same apparel for multiple styles. This is supported from the findings that in the absence of central [e.g., textual] cues, self-generated issue-relevant [e.g., sustainability related] thoughts are processed centrally, after being exposed to the peripheral [e.g., visual] cues among high-involvement individuals (Chang, 2011). In fact, attitudes formed automatically (i.e., peripherally) could be modified through central processing under high-elaboration conditions (Kahle & Homer, 1985). Thus, it could be implied that self-generated issue-relevant thoughts lead to central processing of visual cues among individuals with high involvement with environmental issues. On the contrary, self-congruence could lead to peripheral processing of the same visual cues among individuals with low involvement with environmental issues. Based on this discussion, the following hypotheses are proposed:

H2: When individuals have low involvement with environmental issues, visual cues in the user-centric sustainable advertisement appeal will increase peripheral processing of the advertisement.

H3: When individuals have high involvement with environmental issues, visual cues in the user-centric sustainable advertisement appeal will increase central processing of the advertisement.

Since the elaboration of messages is contingent upon sufficiency of information as well (Poiesz & Robben, 1996), peripheral cues coupled with central cues may enhance the ability to elaborate messages among low-involvement individuals substantially. In fact, peripheral cues coupled with central cues can enhance the level of involvement leading to the processing of advertisement messages centrally (Hennessey & Anderson, 1990). It might be specifically applicable for low-involvement individuals who are influenced by the appearance of the advertisements as well, rather than actual content only (Jones et al., 2006; Schumann et al., 1990). In fact, advertisements with peripheral cues are perceived more attractive than the ones without

peripheral cues (Jones et al., 2006). Attractiveness is a peripheral cue, processed peripherally among the individuals under low involvement conditions (Jones et al., 2006; O'Keefe, 2008). Such evaluations based on superficial cues (e.g., attractiveness) form temporary attitudes toward the issue through peripheral processing (Bitner & Obermiller, 1985; Cacioppo & Petty, 1984). However, peripherally formed attitudes could be modified centrally when an individual gains a high likelihood for elaboration, due to high motivation, ability, or need for cognition. A number of situational and individual difference variables influence the routes of persuasion for an individual (Cacioppo & Petty, 1986). For example, under low-involvement conditions when both peripheral and central cues are present together, use of peripheral cues improve message elaborations compared to declarative statements (Swasy & Munch, 1985).

Since peripheral processing can lead to central processing among high-involvement individuals (Bitner & Obermiller, 1985), in Study 1 it is expected that advertisements with both textual and visual cues will be processed centrally by both sets of individuals who have low and high involvement with environmental issues. Specifically, for individuals having high involvement for environmental issues, it is expected the visual cues will support the message argument of the textual cues in reflecting how the advertised apparel can protect the environment. For individuals having low involvement for environmental issues, it is expected the visual cues on style, self-expression, and affordability will form the needful peripheral cues to gain their attention, due to self-congruence with and attractiveness of the advertisements; such self-congruence is likely to provide them the motivation to process the textual message of the advertisement centrally. Based on this discussion, the following hypothesis is proposed:

H4: Irrespective of the level of involvement with environmental issues, advertisements with textual and visual messages together in the user-centric sustainable advertisement appeal will increase central processing of the advertisement.

Relationships between routes of persuasion and affective response toward sustainable apparel. High message elaboration results in positive thoughts about the object being evaluated under strong message arguments (Chou et al., 2011). For example, figurative headlines serve as strong message arguments generating positive and persistent brand attitudes through elaborate message processing (Jiang & Tao, 2012). Even under moderate arousal conditions, strong message arguments are effective to generate positive brand attitudes (Sanbonmatsu & Kardes, 1988). High elaborations of weak message arguments may generate negative thoughts (Chou et al., 2011; Nelson & Garst, 2005). Therefore, as the textual cues in Study 1 presented strong arguments on how sustainable apparel could meet the needs for style, self-expression, and affordability, while protecting environment along the way, it could be proposed that central processing of UCAs will positively influence favorable affective responses toward sustainable apparel.

Further, peripheral cues immerse individuals into the story portrayed in the advertisement, especially when they have a low need for cognition. Particularly, advertisements with high sensational value (e.g., intense visual images) can evoke high affective response (Kang et al., 2006; Xu, 2015). Furthermore, voice characteristics (i.e., peripheral cue), which cue for the speaker's positive emotional state, are processed peripherally (Gelinas-Chebat & Chebat, 1992), evoking positive emotions in the listener (Bolls et al., 2001). Since sustainable visual cues improve sustainable purchase intentions (Magnier & Schoormans, 2015), it could be implied that visual cues can evoke positive affective responses for sustainable apparel. As the visual cues in Study 1 shows how sustainable apparel can take care of consumers' concerns for apparel consumption, it is

expected that when these cues are processed peripherally (i.e., automatically and effortlessly) it will evoke high positive affective responses toward sustainable apparel.

Both peripheral and central cues together can generate positive attitudes toward advertisements (Butt & Run, 2011; Lord et al., 1995). Specifically, under high arousal conditions, individuals often do not have the ability to elaborate messages meticulously and develop an attitude toward brands. As such, peripheral cues, in addition to central cues, enhance the processing capacity because inferences could be drawn from the peripheral cues easily. Often, such advertisements with both peripheral and central cues can kindle central processing to form enduring attitudes (Butt & Run, 2011; Sanbonmatsu & Kardes, 1988). In fact, coupling high sensational values with cognitive values (e.g., complexities in detailed information) in advertisement messages does not necessarily distract the focus from the central advertisement argument. Rather, such coupling enhances message persuasiveness, due to generating higher attention and affective responses, as compared to when only cognitive values are present (Kang et al., 2006; Xu, 2015). Therefore, the following hypotheses are proposed:

H5: Central processing of UCA for sustainable apparel will positively influence favorable affective response toward sustainable apparel.

H6: Peripheral processing of UCA for sustainable apparel will positively influence favorable affective response toward sustainable apparel.

H7: UCA for sustainable apparel, presented in both textual and visual modality will evoke higher favorable affective responses toward sustainable apparel, compared to when the advertisement is presented in *only textual* or *only visual* modality.

H8: Routes of persuasion mediates the relationships between message modalities for UCA appeals and affective response toward sustainable apparel. Specifically,

H8a: Central processing mediates the relationships between textual modality and affective response toward sustainable apparel.

H8b: Peripheral processing mediates the relationships between visual modality and affective response toward sustainable apparel.

H8c: Central processing mediates the relationships between textual with visual modality and affective response toward sustainable apparel.

Relationship between affective response toward and purchase intentions for sustainable apparel. When consumers have higher concerns for the environment, they tend to make sustainable choices (Alles et al., 2017). They even tend to positively evaluate a company and show greater purchase intentions when a company follows environmentally sustainable practices (Choi & Ng, 2011). Positive thoughts evoked by high or low involvement elaborations generate confidence, which, in turn, develop a positive attitude toward products (Chou et al., 2011). Attitude toward advertisement can have a direct influence on purchase intention. Consumers form favorable perceptions about advertisements when they find the message argument quality and peripheral cues credible; thereby, leading to positive purchase intentions (Lord et al., 1995). Therefore, in the context of Study 1, it could be implied when message arguments and peripheral cues in the UCAs are found credible, they can lead to a positive affective response toward sustainable apparel, leading to a positive intention for sustainable apparel.

It could be further supported by the findings that affective attitude (Park & Ha, 2012) and anticipatory emotions toward pro-environmental behaviors (e.g., pride, pleasure, guilt, nervousness) influence pro-environmental behavioral intentions (Onwezen et al., 2014; Rezwani et al., 2017). A sense of pride (vs. guilt) for making (vs. not making) a sustainable purchase decision engenders future sustainable purchase decisions, to reaffirm (vs. compensate for) the sense of pride (vs. guilt)

(Antonetti & Maklan, 2014). A happy state-of-mind influences immediate pro-environmental behaviors (Joo & Lee, 2014). Therefore, through the UCAs, individuals could evoke positive affective responses toward sustainable apparel, due to positive affective response in the hope of protecting the environment (e.g., among individuals highly involved with environmental issues) or buying affordable apparel and satisfying needs for style and self-expression (e.g., among individuals lowly involved with environmental issues). Therefore, in Study 1, it is expected a higher, positive affective response toward sustainable apparel generated through the processing of UCAs will lead to a higher purchase intention for sustainable apparel. Based on this, the following hypothesis is proposed:

H9: Affective response toward sustainable apparel will positively influence the purchase intentions for sustainable apparel.

Relationships between message modalities for user-centric sustainable advertisement appeal and purchase intentions for sustainable apparel. Purchase intentions for sustainable products could be enhanced through advertisements having both visual and textual cues on sustainability, even among consumers with low involvement with environmental issues. Visual sustainable cues can improve sustainable purchase intentions among consumers with high involvement with environmental issues as well (Magnier & Schoormans, 2015). However, textual sustainable cues of a product do not translate into high, sustainable purchase intention, unless consumers are already engaged in sustainable consumption behavior (O'Rourke & Ringer, 2016). This implies textual cue alone may not be effective in encouraging sustainable purchase intentions among individuals who have low involvement for environmental issues. Since affect plays a greater role to encourage sustainable behavior than logical reasoning (Antonetti & Maklan, 2014; Chan & Yam, 1995) and textual cues are processed centrally through logical reasoning (Walker et al., 2008),

it is expected in Study 1 that advertisement with both visual and textual cues will result in higher purchase intentions for sustainable apparel as compared to advertisements with textual or visual cues only.

Furthermore, since consumers pay a lot of attention to the aesthetic factors in a sustainable advertisement while making a purchase decision (Huertas-Garcia et al., 2016), in Study 1, advertisement appeal exposed through both textual and visual cue will allow consumers to evaluate aesthetic value (e.g., style, self-expression) of sustainable apparel elaborately, thereby increasing the potential for improving purchase intentions for sustainable apparel. Based on this discussion, the following hypothesis is proposed:

H10: Textual with visual messages in the user-centric sustainable advertisement appeal will result in a higher purchase intention toward sustainable apparel than advertisements presented in *only textual* or *only visual* messages.

Based on the hypotheses mentioned above, the following conceptual model is proposed (Figure 2):

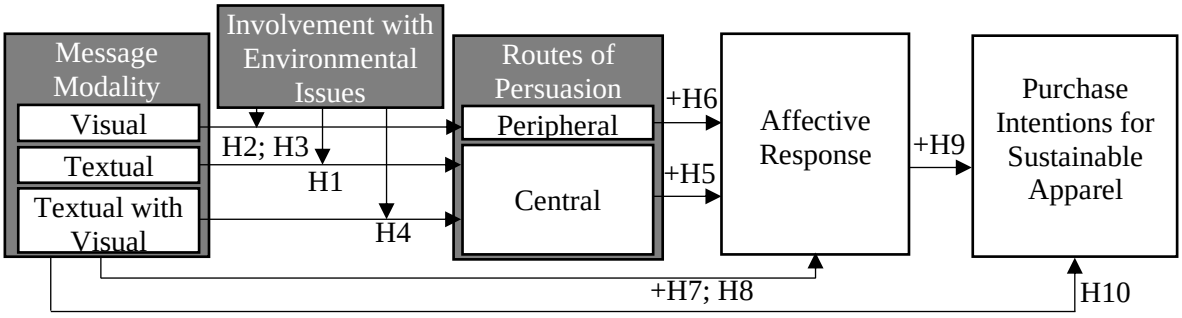

Figure 2. Conceptual model 1.

Study 2.

Relationships between advertisement appeal concern, appraisal, and purchase intention for sustainable apparel. Becker et al. (2014) indicated messages related to concerns and benefits of sustainability can alter the way an individual appraises sustainability, especially when the individuals are exposed to these messages for a long duration of time, leading to pro-environmental

behaviors. When consumers find the green retail-environment aligned to their own self-image of being environmentally conscious, they exhibit high store loyalty (Yusof et al., 2011), thereby indicating how congruence in the advertisement/retail appeal with consumers' concerns for maintaining a self-image could result in positive appraisal of an advertisement/in-store appeal. This parallels with Desmet's (2003) model, which indicates individuals appraise an object in terms of its congruence with their concerns.

Appraisal of sustainable apparel as motive compliant. de Barcellos et al. (2011) and Francis and Davis (2015) indicated when there exists a high concern for affordability, consumers may have unsustainable purchasing behaviors, even when they have positive sustainable attitudes. For example, when income is low and sustainable food (e.g., organic) prices are high, consumers tend to have an unsustainable purchase behavior, even when they have sustainable attitudes (de Barcellos et al., 2011). However, when affordability is not a concern, consumers make healthier food choices (Alles et al., 2017). Often, even when consumers have high sustainable knowledge, they make sustainable food choices only when the prices are low (Peschel et al., 2016). Ramirez (2013) suggested sustainable consumption could be encouraged when comparable products are offered at a relatively lower price, so consumers do not feel that they are paying a premium price to purchase sustainable products. All these instances converge to imply when consumers have a motive of buying affordably, they will appraise an object in terms on its ability to comply to a budget, irrespective of their knowledge or attitude toward the environment.

Desmet (2003) suggested when an individual has a concern for accomplishing a certain goal (i.e., "state of affairs that we want to obtain" or how someone "would like things to be" p. 9) and an object facilitates goal accomplishment, the object will be appraised as motive compliant. While appraising the object, the individual will utilize his/her existing knowledge about the object and

appraise the potential consequences of using the object in accomplishing the goal (Desmet, 2003). Drawing from Leder et al.'s (2004) model, such appraisal will involve both automatic and deliberate cognitive processing. For example, an individual utilizes his/her coping potential in the form of domain specific expertise, knowledge, interest, and personal taste (Silvia, 2013) in both automatic (implicit memory integration) and deliberate (explicit classification and cognitive mastering) cognitive processes (Leder et al., 2004) to evaluate the degree the object can aid in accomplishing a goal. When the meaning of the object being appraised is comprehended successfully, it elicits positive judgment (Leder et al., 2004). In the context of the present study, it could be implied when individuals, who are highly concerned for affordability, are exposed to advertisements evincing how sustainable apparel could be affordable, they would find sustainable apparel compliant to their motive of buying affordably. As such, they are likely to evaluate sustainable apparel based on their own coping potential formed by their knowledge about other sustainable apparel and price. Also, drawing from Leder et al.'s (2004) model, it is expected that advertisement appeals focusing on affordability of sustainable apparel could make sustainable apparel self-relevant for consumers with high concerns for affordability. This is likely to increase the potential of appraising sustainable apparel as motive compliant.

Therefore, based on this discussion, it could be implied when consumers appraise sustainable apparel as compliant to their motive of buying affordably, it can lead to positive purchase intentions. As such, if an advertisement appeal effectively communicates how sustainable apparel could comply to consumers' motives for buying affordably, purchase intentions for sustainable apparel could be encouraged.

Appraisal of sustainable apparel as intrinsically pleasant. Depending upon how consumers identify themselves socially, they can have different kinds of sustainable consumption. For

example, when consumers socially identify themselves with organic, environmentally friendly, and fair-trade products, they will engage more with the consumption of organic, environmentally friendly, and fair-trade products, respectively (Bartels & Reinders, 2016). This emphasizes how individuals' concerns for socially identifying in certain ways can predict different kinds of sustainable consumption behaviors. Moreover, individuals tend to make more sustainable choices (e.g., consumption intention of organic and fair-trade products) when they are in front of others, than when they are in private (Onwezen et al., 2014). This indicates the significance of consumers' concerns for social desirability to predict sustainable consumption behaviors.

Desmet (2003) suggested "the points of reference in the appraisal of appealingness are attitudes" (p. 10). When an individual has a concern for appealingness, an object is appraised in terms of its intrinsic pleasantness (Desmet, 2003). Finding something appealing could come automatically or by learning (Desmet, 2003). Drawing from Leder et al.'s (2004) model, processing of an aesthetic stimulus could take place automatically when the object has novelty, unfamiliarity, and complexity. Therefore, individuals who have concerns for appealingness may find an object as pleasant automatically when the object has high novelty, unfamiliarity, and complexity. However, with progressive deliberate appraisal of the object, the individual will gain a deeper meaning of the object, thereby aesthetically judging the object (Leder et al., 2004) as intrinsically pleasant. For example, individuals strive to present themselves appealingly in the social context through apparel consumption (Harris et al., 2016). Nghiem and Carrasco (2016) indicated sustainable consumption through peer-pressure could be encouraged by linking sustainable consumption with consumers' social media accounts. Harris et al. (2016) suggested when consumers have high concerns for dressing according to the social setting, they tend to have lower intentions for SAC, in the anticipation of being perceived as dressed inappropriately.

Therefore, it could be implied when individuals' concerns for social desirability is high, sustainable apparel consumption is more likely appraised in terms of its ability to project an appealing image in the social setting. Drawing from Leder et al.'s (2004) model, it could be suggested that consumers having high concerns for social desirability will find those advertisements more self-relevant, which are focused on social desirability. Specifically, based on Desmet's (2003) model, it could be implied that such a concern for presenting oneself as appealing in the social setting could result in the appraisal of sustainable apparel in terms of being intrinsically pleasant.

Appraisal of sustainable apparel as legitimate. Desmet (2003) suggested when an individual has concerns about meeting certain standards (e.g., on how things should be or how people should act), they appraise objects to see how they can meet up to these standards. When an object facilitates in meeting these standards, the object is appraised as legitimate. In this process, individuals draw from set social norms and belief systems to make judgmental evaluations of the object; specifically, the object is appraised by evaluating how it may have an impact on society or people (Desmet, 2003). This appraisal process could be further supported from Leder et al.'s (2004) model, which indicates individuals' domain specific expertise, declarative knowledge, interest, and personal taste are influenced by social interaction discourse. This influences an individual's coping potential for appraising an object (Silvia, 2013), especially in the deliberate processing stages of explicit classification and cognitive mastering (Leder et al., 2004).

In the context of pro-environmental behaviors, when individuals are highly involved in environmental issues (e.g., recognizing the problems in environment), they engage in pro-environmental behaviors; whereas, when the individuals are not involved in environmental issues (e.g., do not recognize environmental issues), they do not engage in pro-environmental behaviors (Major, 1993). This indicates how the same environmental issues could be appraised differently by

individuals, depending upon how concerned they are about the issues and how they can comprehend the significance of these issues (based upon domain specific expertise, declarative knowledge, interest, and personal taste in environmental sustainability-related issues). Green purchasers (i.e., concerned about environment) have higher, affective attitudes and social norms, leading to pro-environmental behaviors than non-green purchasers (Park & Ha, 2012). Alles et al. (2017) indicated when individuals are highly concerned about the environment, they tend to make more sustainable purchase decisions. Parallel to this finding, Dascher et al. (2014) indicated when consumers have concerns about a particular environmental issue (e.g., drought), their behavior will relate more to that issue, rather than being entirely general. This further corroborates when individuals are concerned about the environment, they try to behave in ways that seems legitimate with their concerns for protecting the environment. However, when the concern for sustainability is low, consumers may not have high purchase intentions from sustainable brands, even when they have high sustainable awareness (Galbreth & Ghosh, 2013). Taking support from Leder et al. (2004) and Silvia's (2013) models, it could be further suggested when individuals have a high concern for the environment, they will find an advertisement appeal focused on the environment self-relevant. Such self-relevance is likely to motivate them to process the advertisement further to see the veracity of the green claims made in the advertisement. Linking this with Desmet's (2003) model, it could be implied when the advertisement appeal reflects a high concern for the environment, sustainable apparel consumption could be appraised in terms of how such apparel may facilitate to lower negative impacts on the environment. As such, appraisal is about whether the sustainable apparel can significantly contribute to protect the environment. Sustainable apparel is likely appraised in terms of its legitimacy for protecting the environment when consumers' concerns are to protect the environment.

Based on these discussions, the following hypotheses are proposed for Study 2:

H11: Advertisement appeal with concern for affordability will lead to higher purchase intentions for sustainable apparel, as compared to advertisement appeals with concerns for social desirability and the environment protection.

H12: Concern for affordability (in sustainable apparel advertisement appeal) will result in a higher appraisal of motive compliance in the sustainable apparel, as compared to intrinsically pleasant or legitimate.

H13: Concern for social desirability (in sustainable apparel advertisement appeal) will result in a higher appraisal of intrinsic pleasantness in the sustainable apparel, as compared to motive compliance or legitimate.

H14: Concern for the environment (in sustainable apparel advertisement appeal) will result in a higher appraisal of legitimacy in the sustainable apparel, as compared to motive compliance or intrinsic pleasantness.

Relationship between appraisal of sustainable apparel, emotional response toward sustainable apparel, and purchase intention. Joo and Lee (2014) suggested positive emotions (e.g., happiness) lead to sustainable behaviors (e.g., eco-driving), when exposed to sustainability-related cues (e.g., in-car voice appeals encouraging eco-driving). Antonetti and Maklan (2014) indicated when consumers perceive themselves as effective in bringing change toward sustainability, their positive emotional responses (e.g., pride) can lead to sustainable purchase intentions. Brengman et al. (2012) suggested positive emotions (e.g., pleasure) evoked as a result of green and relaxing retail space can lead to approach behavior, whereas negative emotions (e.g., stress) can lead to avoidance behaviors. Therefore, it could be implied that positive emotions could predict purchase intentions positively.

Instrumental emotions evoked from appraising goals as motive compliant. Desmet (2003) suggested when an object facilitates goal accomplishment, the object will be appraised as motive compliant and evoke instrumental emotions (e.g., satisfaction). When the meaning of the object appraised is comprehended successfully, it elicits positive emotions (Leder et al., 2004; Silvia, 2013). Therefore, this further supports Desmet (2003) when the meaning of an aesthetic stimulus has been found as conducive for goal accomplishment, the object will be judged/appraised as motive compliant, thereby eliciting final deliberate instrumental emotions.

For example, consumers also tend to have high sustainable behaviors (e.g., purchase intention for reusable products), when they are exposed to advertising appeals congruent to their specific concerns (e.g., self-identity, immediate situations, etc.), rather than general descriptive appeals (Ryoo et al., 2017). Consumers' purchase intentions could also be converted from being unsustainable to sustainable, too, through message appeals convincing consumers about sustainable consumption, rather than with appeals that force them to be sustainable (Testa et al., 2018). For example, if sustainable products are offered at affordable prices, sustainable consumption could be encouraged, since consumers no longer require paying a premium price to purchase sustainable products (Ramirez, 2013). Therefore, given price-sensitive consumers appraise sustainable products on the basis of value for money and the potential consequences of buying (e.g., durability of the product) (de Barcellos et al., 2011), it could be implied when consumers appraise an object (e.g., sustainable apparel) as compliant to their motive (e.g., buying affordably), they can evoke positive instrumental emotions (e.g., satisfaction), leading to positive purchase intention.

Aesthetic emotions evoked from appraising goals as intrinsically pleasant. Desmet (2003) suggested when an individual has a concern for appealingness and an object is appraised as intrinsically pleasant, aesthetic emotions (e.g., liking) are evoked. Drawing from Leder et al.'s

(2004) model, automatic processing of an aesthetic stimulus can evoke surprise or interest emotions when the object has novelty, unfamiliarity, and complexity. With progressive deliberate appraisal of the object, the individual will gain a deeper meaning of the object, thereby aesthetically judging the object (Leder et al., 2004) as intrinsically pleasant, translating into a stronger, deliberate aesthetic emotional response. For example, individuals strive to present themselves appealingly in the social context through apparel consumption (Harris et al., 2016). Sometimes, even when consumers are aware of the negative impacts of their consumption on the environment, they still consume apparel unsustainably, to confirm to societal pressures (McNeill & Moore, 2015). However, sustainable consumption could be encouraged by linking sustainable consumption with consumers' social media accounts when there is a peer-pressure of behaving ethically (Nghiem & Carrasco, 2016). Therefore, aligning this with the aforementioned propositions by Desmet (2003), Leder et al. (2004), and Silvia (2013), it could be implied when consumption of sustainable apparel visible to others is perceived as appealing (e.g., by projecting an ethical image in the societal setting), it could evoke aesthetic emotions (e.g., liking, feeling attracted to) in those individuals who are highly concerned about social desirability. As such, a positive aesthetic emotional response toward sustainable apparel could translate into a high positive purchase intention for sustainable apparel.

Social emotions evoked from appraising goals as legitimate. Desmet (2003) further suggested when an object facilitates in meeting certain set standards, the object is appraised as legitimate, eliciting social emotions (e.g., admiration). As such, processing involves strong deliberations on how the object may impact society or people. Thus, strong, deliberate, social emotional responses should be evoked. It could be further supported by Silvia (2009), who described a similar class of emotions as social emotions, namely self-conscious emotions (e.g.,

pride, guilt, regret, and embarrassment); these emotions could be evoked when individuals can behave according to their values.

For example, individuals with high concerns for the environment appraise objects based on their potential impact on the environment and values for protecting the environment (Dascher et al., 2014; Francis & Davis, 2015). Consumers appraise a product positively when the green claim for the product is perceived moderate (Manrai et al., 1997). Antonetti and Maklan (2014) indicated when individuals can make their purchase decisions by complying to their personal norms in support of ethical consumption, they evoke positive emotions (e.g., pride), which can predict future positive purchase intentions. Rezvani et al. (2017) indicated anticipatory emotions (e.g., pride, pleasure, regret, nervousness, etc.) mediate the relationship between personal norms related to the environment and pro-environmental intentions. Anticipatory emotions also positively influence pro-environmental intentions directly (Rezvani et al., 2017). Therefore, based on these findings and the propositions by Desmet (2003), Leder et al. (2004), and Silvia (2013), it could be implied when consumers appraise a sustainable message to be legitimate, they evoke positive social emotions (e.g., admiration), which may translate into pro-environmental intentions (e.g., purchase intentions). Based on these discussions, the following hypotheses are proposed:

H15: Appraisal of sustainable apparel as motive compliant will influence instrumental emotional response.

> **H15a:** Appraisal of sustainable apparel as motive compliant in terms of perceived benefits of affordable sustainable apparel consumption will positively influence instrumental emotional responses.

H15b: Appraisal of sustainable apparel as motive compliant in terms of perceived barriers toward affordable sustainable apparel consumption will negatively influence instrumental emotional responses.

H16: Appraisal of sustainable apparel as intrinsically pleasant will positively influence aesthetic emotional responses.

H17: Appraisal of sustainable apparel as legitimate will positively influence social emotional responses.

H18: A higher positive emotional response (instrumental, aesthetic, and social) will positively influence purchase intentions for sustainable apparel.

H19: Appraisal of sustainable apparel will mediate the relationships between concerns in the advertisement appeals and emotional responses. Specifically,

H19a: Appraisal of sustainable apparel as motive compliant will mediate the relationships between affordability-related concerns in the advertisement appeals and instrumental emotional responses.

H19b: Appraisal of sustainable apparel as intrinsically pleasant will mediate the relationships between social desirability-related concerns in the advertisement appeals and aesthetic emotional responses.

H19c: Appraisal of sustainable apparel as legitimate will mediate the relationships between environment-related concerns in the advertisement appeals and social emotional responses.

Based on the hypotheses mentioned above, the following conceptual model is proposed (Figure 3):

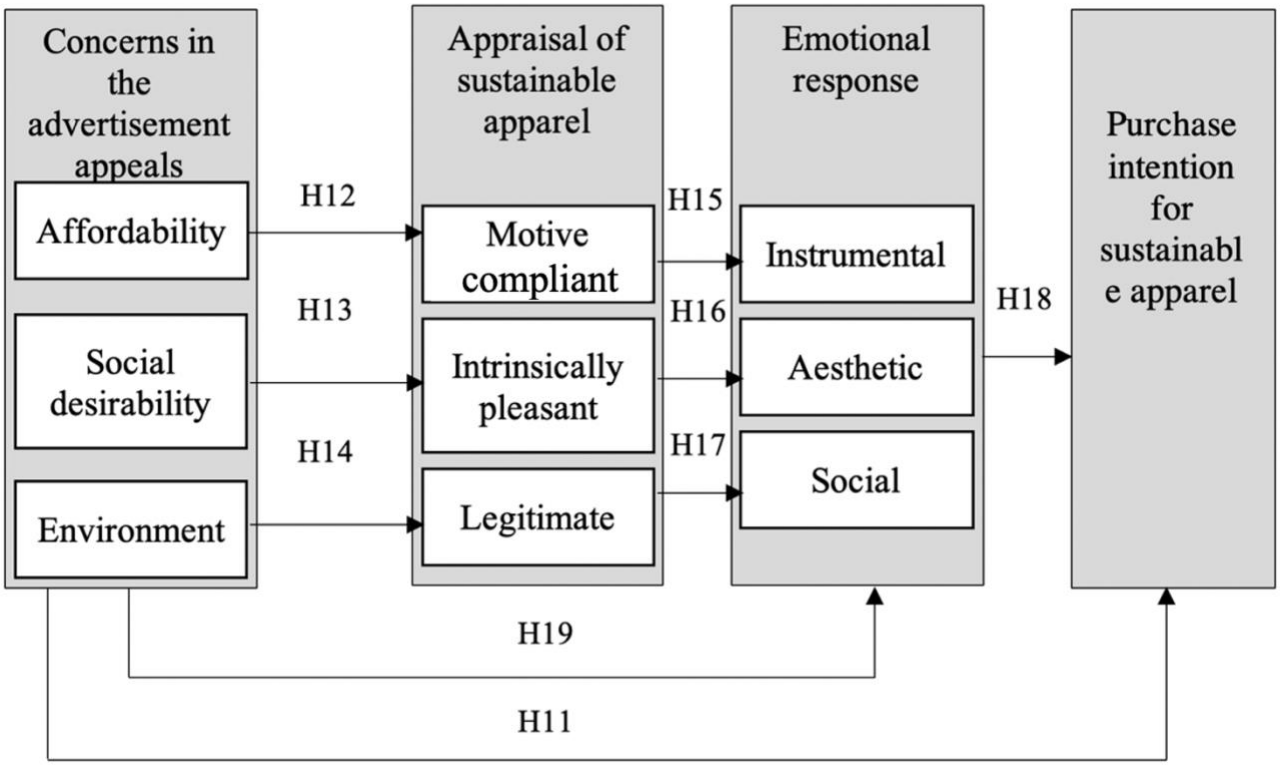

Figure 3. Conceptual model 2 based on Desmet's (2003) conceptual framework. Figure 4 describes the underlying psychological mechanism in appraising sustainable apparel, based on Leder et al.'s (2004) and Silvia's (2013) models.

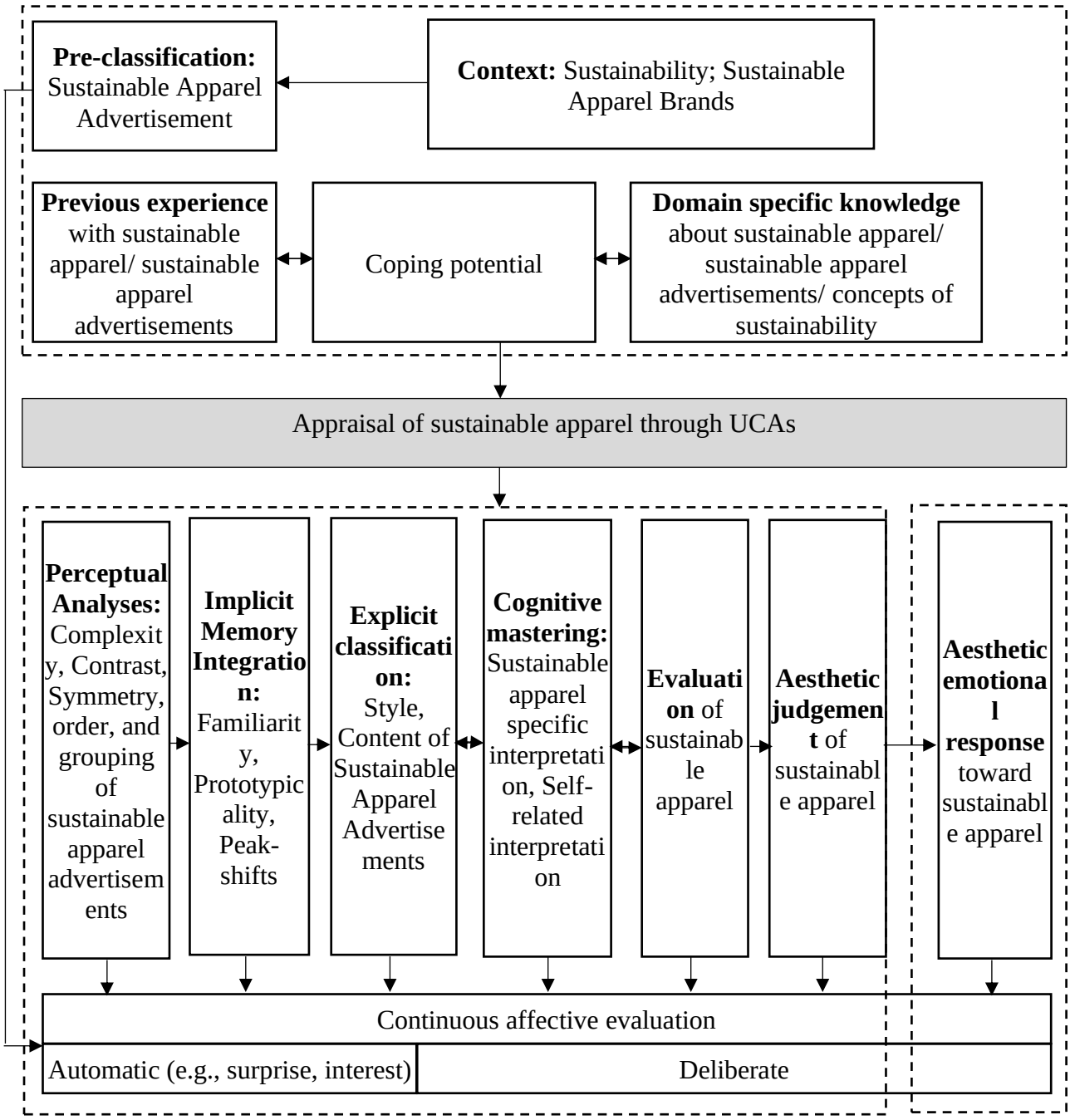

Figure 4. Integrating the conceptual frameworks of Leder et al. (2004) and Silvia (2013), the figure describes the different stages of the psychological processing during appraising sustainable apparel. Figure 5 is a comprehensive model, integrating the conceptual frameworks of Leder et al. (2004) and Silvia (2013) to support the conceptual model proposed in the present study based on Desmet's (2003) model.

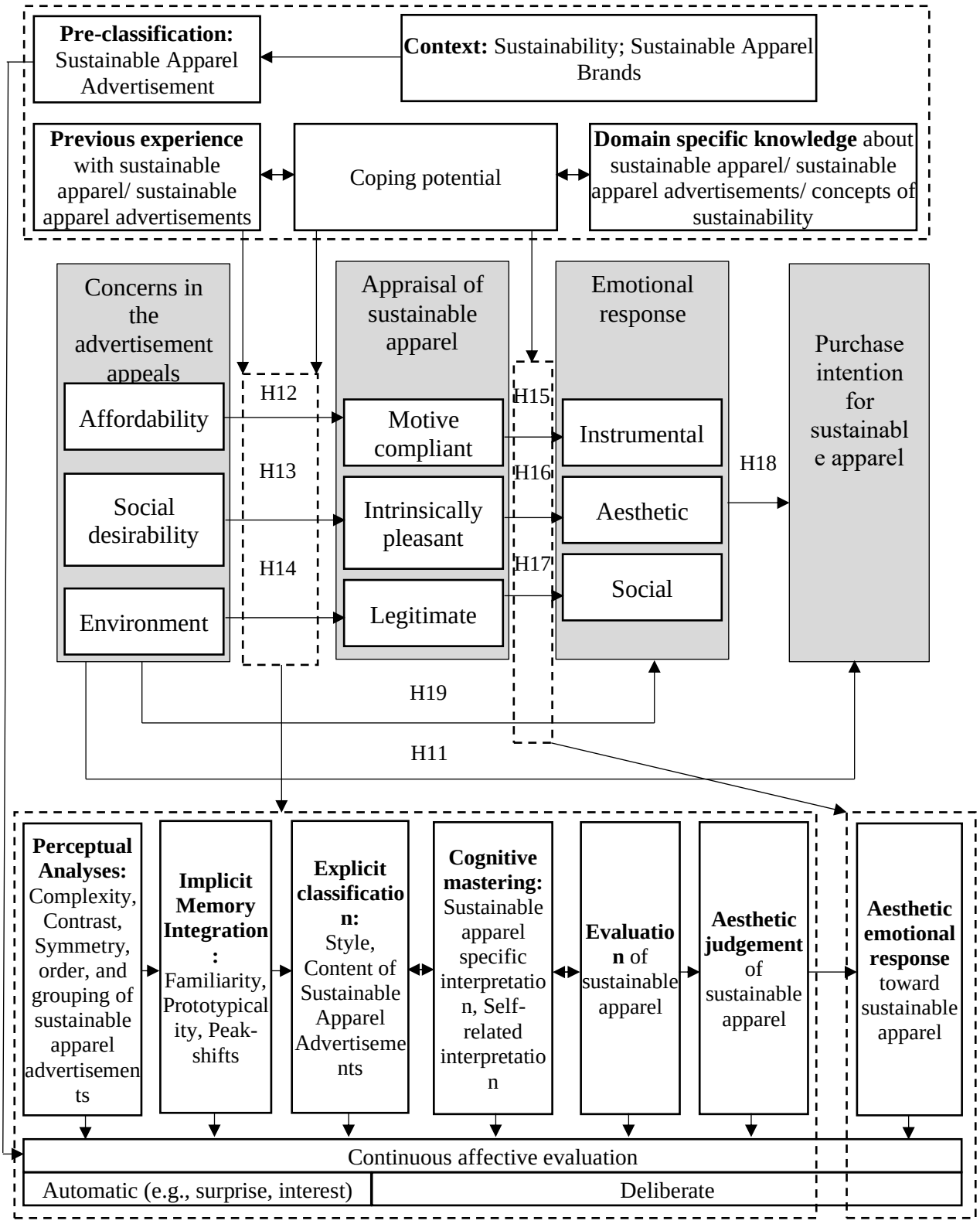

Figure 5. Comprehensive view of Conceptual model 2, described with the integrated theoretical frameworks of Desmet (2003), Leder et al. (2004), and Silvia (2013).

Chapter 3: Methodology

In this chapter, details on research design, sample, sampling procedure, stimuli development, and execution procedures of Study 1 and Study 2 are discussed.

Research Design

Study 1. Studies have widely used experimental designs to test conceptual models grounded in ELM (Bhutada et al., 2017; Braverman, 2008; Jiang & Tao, 2012; Jones et al., 2006). Since the proposed conceptual model 1 is grounded in ELM, a between-subject (UCAs in textual vs. visual vs. textual with visual modalities) experimental design was used to examine this model.

Involvement with environmental issues was measured, rather than manipulated. Many studies grounded on ELM have treated various forms of issue-involvement variables as measured variables (Bhutada et al., 2017; Braverman, 2008). Since issue-involvement is an individual difference variable, treating this as a measured variable allowed examination if participants' existing involvements with environmental issues influenced the way they processed UCAs. Therefore, this enhanced the external validity of the findings.

The study also statistically controlled for potential confounders—fashion innovativeness, affordability for apparel, and need for cognition. The rationale behind controlling for potential confounders was to increase the internal validity of the findings. The rationale behind identifying fashion innovativeness as one of the potential confounders is when individuals have high fashion innovativeness, they tend to evaluate apparel on the basis of how it can facilitate their styling and self-expression more than individuals who have low fashion innovativeness (Matthews & Rothenberg, 2017). As the UCA appeal for Study 1 was mostly about styling and self-expressing through sustainable apparel, individuals who have high fashion innovativeness may process this appeal with greater elaborations than individuals having low fashion innovativeness. Similarly,

individuals with higher concerns for affordability (i.e., the ability to pay for a product or service, Williams et al., 2012) and need for cognition (i.e., the innate need to process complex messages and engage in intellectual works, Ho & Bodoff, 2014) may process the advertisement appeals more elaborately than individuals with lower concerns for affordability and need for cognition. Therefore, controlling for these three potential confounders enhanced the internal validity of the experiment and confidence to explain the findings.

Study 2. The conceptual model for Study 2, was tested through a 3 (Advertisement appeal: Affordability vs. Social desirability vs. Environment protection) x 2 (textual vs. textual with visual) between-subject experimental design. Even though the effects of the UCA modality on the research variables were not hypothesized in Study 2, the rationale behind this design was to investigate if the individual UCAs are appraised in the hypothesized ways (i.e., affordability appeal as motive compliant, social desirability appeal as intrinsically pleasant, and environment protection appeal as legitimate), irrespective of message modalities. This enhanced the external validity of the findings in terms of the two modalities of the UCA. The rationale behind choosing textual and textual with visual modalities and excluding visual modality alone was due to the successful manipulation of the textual and textual with visual modalities and unsuccessful manipulation of the visual modality alone in the pre-tests (see results section).

Additionally, Study 1, Study 2 controlled for fashion innovativeness and need for cognition to minimize potential confounding effects as described previously. However, given affordability was already present as a concern in one of the UCAs, affordability was not controlled in Study 2.

Sample and Sampling Procedure

Sample characteristics and sampling procedure. Studies on sustainability have increasingly targeted the population of millennials (i.e., individuals born between 1981-1996, and in

the age group of 22 to 37 years, Pew Research Center, 2019), primarily due to their high cause-related consumption intentions, environmental concerns, and sustainable behaviors (Cho et al., 2015; Luchs et al., 2012; Pomarici & Vecchio, 2014). The population of millennials in the U.S. was projected around 73 million for 2019 and is the largest generational cohort in the U.S. (Pew Research Center, 2019). Therefore, given the present study is focused on sustainable consumption, millennials seemed the ideal target population. Furthermore, millennials form the core workers of Amazon Mechanical Turk (MTurk; Buhrmester et al., 2011; Kulwin, 2016). Therefore, MTurk formed an appropriate sampling frame for the study. However, female consumers are more involved with environmental issues and sustainability than male consumers (Cho et al., 2015; Luchs et al., 2012). Also, factors related to style and fashion influence female consumers' evaluation of products more than male consumers (Kim et al., 2002; Pentecost & Andrews, 2010). As style and self-expression were important concerns for the UCA appeal in Study 1, female millennials residing in the U.S. specifically were considered ideal. Therefore, in Study 1 female millennials of the U.S. were recruited from MTurk through homogenous sampling (i.e., a non-probabilistic way of purposive sampling where the participants share some likeness in terms of age, life experiences, etc., Etikan et al., 2016).

To ensure only female millennials of the U.S. were recruited for Study 1, the Qualtrics questionnaire administered through MTurk included screening questions. The first screening question screened out the millennial participants (i.e., born between 1981-1996). Next, only the female participants were screened out. Finally, only those who resided in the U.S. were accepted and proceeded to the main survey. All other participants, who were not female millennials in the U.S., were taken to the survey's terminal page and thanked for their interest in the study.

For Study 2, millennials from the U.S., irrespective of gender were recruited for data collection. The rationale behind including male millennials for Study 2 was social desirability was not restricted to style or self-expression through sustainable apparel in this study. Rather, it was conceptualized in terms of projecting an ethical self in the social setting. This concern may apply to both genders. Also, including male millennials in Study 2 enhanced the external validity of the findings. The participants were recruited from MTurk in the same way as for Study1; only the question for screening female participants was excluded in Study 2.

Sample size. Considering a confidence level of 95%, a population size of 73,000,000 (as reported by Pew Research Center, 2019), and 5% margin of error, the ideal sample size was calculated as 385. This sample size was calculated from Qualtrics' sample size calculator, as posted on July 19, 2019. A subject to item ratio of 10:1 is considered acceptable to conduct Exploratory Factor Analysis (EFA; Nunnally, 1978; Osborne & Costello, 2004). The maximum number of items in a single scale for both Study 1 and Study 2 was 10. Therefore, a minimum sample size of 100 was considered adequate to run EFA for both Study 1 and Study 2. A minimum sample size of 300 is deemed sufficient to make close approximation estimates for the population parameters for data analyses involving ANCOVA (Bujang et al., 2017). The minimum sample size for calculating Structural Equation Modelling is 200 (SEM, Barrett, 2007). For SEM analysis, a minimum sample size of 150 is considered sufficient for convergence and proper solution when latent variables with three or more indicators per factor exist (Anderson & Gerbing, 1984). Given all latent variables in Study 1 and Study 2 have more than three indicators per factor, a minimum sample size of 300 was considered acceptable to compute all required analyses, i.e., EFA, ANCOVA, variants of ANCOVA (e.g., MANCOVA), and SEM.

Stimuli Development and Manipulation Check

Stimulus development for Study 1. First, existing advertisements for sustainable apparel brands (e.g., Patagonia, Reformation, Everlane, PeopleTree, TenTree, H&M, Vetta, Nudie Jeans) were analyzed based on how consumers may process these advertisements (centrally or peripherally). An analysis found the advertisements lacked one or the other concerns for apparel consumption (e.g., style, self-expression, affordability) and largely focused on environment protection. Therefore, the UCA appeal for this study merged many themes that emerged from these advertisements to develop a comprehensive theme that largely focused on consumers' concerns for apparel consumption, while hinting on environment protection.

Specifically, the UCA appeal for Study 1, adapted from Vetta's advertisement (see Appendix A), has the message of creating 30 outfits by mixing and matching five clothing items. This appeal is important because of its persuasion to indicate styling and self-expression from sustainable apparel. However, the advertisement does not directly say how much money can be saved from buying five items equivalent to 30 outfits. Therefore, Vetta misses the opportunity to project how sustainable apparel could be affordable in the long run. Therefore, in Study 1, the textual message explicitly states investing in five sustainable apparel items can help save more than 2,500 USD (considering the average price of a sustainable apparel is around 100 USD). This is expected to strengthen the message argument. However, in the visual modality, this description is unavailable. As such, a visual cue for saving money is used.

Furthermore, even though Vetta is a sustainable apparel brand, the information does not emerge from its advertisement explicitly. In Study 1, the advertisement appeal included cues that hint a love for nature. Specifically, it draws from the advertisements of H&M's conscious collection (example in Appendix B) which integrates visuals of plants, flowers, and green color with the

advertised appeal, without overpowering the theme of environment on style/fashion. These themes were integrated in Adobe Photoshop™ and three versions of the UCA were created in terms of three modalities (textual vs. visual vs. textual with visual).

The UCAs were created for a fictitious brand—Fern. Fictious brand names are widely used in studies for advertisements and branding to ensure brand familiarity with existing brands do not confound the findings of the study (Bhutada et al., 2017; SanJosé-Cabezudo et al., 2009). This method enhanced the internal validity of the experiment. The name Fern, too, hinted a love for nature. Examples of the developed stimuli are given in Appendix C. Before using these stimuli for Study 1, their validity was tested by conducting a pre-test. Details of the pre-test procedure and results are discussed in the results section.

Stimulus development for Study 2. The advertisement appeals were created using Adobe Photoshop™. Similar to Study 1, these appeals were created in the context of a hypothetical, sustainable apparel brand, Pinecone. The rationale behind creating the advertisement appeals for a hypothetical brand was to minimize any potential confounding effect on the findings, due to participants' familiarity with well-known brands. However, to maintain realism, the template for advertisement appeals was created by simulating webpages of online stores of real, sustainable apparel brands, such as Patagonia, Everlane, and Reformation. Therefore, the stimuli were created in the form of advertisement messages displayed on the webpage of a fictitious apparel brand—Pinecone. To maintain consistency across the stimuli, a basic template was used for all advertisement appeals (e.g., background, side menus, top menus, position of the textual and visual appeals, product category, models displaying the apparel, apparel worn by the models, etc.). The stimuli varied only in terms of the textual and visual cues reflecting one of the advertisement concerns—affordability, social desirability, and environment protection. However, these stimuli

were further modified, due to unsuccessful manipulation checks for both concerns and modalities in the first round of the pre-test. Details for finalizing the stimuli through a second round of pre-test and their successful manipulation checks are discussed in the results section.

Experimental Process

Experiments for Study 1 and Study 2 were conducted by self-administering and self-reporting two internet questionnaires developed in Qualtrics, shared through MTurk. Before taking surveys, the participants read and consented to the Institutional Review Board (IRB) approved information letters. Only after consenting to the IRB approved information letters, could they enter the screening process. After screening to meet the studies' criteria, the participants entered the main questionnaire page. At the end of the Study 1 and Study 2, the participants were given 50 cents as participation compensation. The responses were collected as completely anonymous and confidential. Only my faculty advisor and I had access to the data.

The participants were assigned to one of the treatment groups randomly. Since random assignment enhances both internal and external validity of experimental studies (Ferguson, 2004), it is expected that random assignment of the participants in one of treatment groups enhanced the internal validity of the experiments and external validity of the findings. There were three treatment groups for Study 1 (i.e., UCAs presented in textual, visual, and textual with visual modalities) and six treatment groups for Study 2, as a result of six combinations of two manipulated variables (i.e., advertisement appeal concerns and message modalities).

Study 1. Participants were first asked to respond to items measuring involvement with environmental issues. Second, they were asked to respond to some unrelated questions (i.e., filler questions), so their mind is distracted from the effect of responding to items related to involvement with environmental issues. Third, they were informed they would be shown an advertisement of a

newly found sustainable apparel brand, named Fern, and the researchers are interested in knowing their opinion about the advertisement. Fourth, they were shown the UCA with one of the modalities, followed by its manipulation check question. Fifth, questions for the research variables were presented.

First, they were asked to rate their purchase intentions for sustainable apparel, followed by rating affective response toward sustainable apparel, routes of persuasion, and control variables (i.e., fashion innovativeness, affordability for apparel, and need for cognition). Next, they responded to the demographic questions (age, annual household income, educational qualification, employment status, ethnicity, and marital status). Finally, at the conclusion, they were provided with the MTurk survey code for receiving compensation and a thank you message for participating in the study.

Study 2. Participants were first briefed the study is conducted to obtain their opinions about a new sustainable apparel brand. Next, they were randomly assigned to one of the six UCAs, followed by the manipulation check questions, measured variables (purchase intention for sustainable apparel, emotional responses toward sustainable apparel; appraisal of sustainable apparel; concern for affordability, social desirability, environment protection, fashion innovativeness, need for cognition), and demographics items (age, annual household income, educational qualification, employment status, ethnicity, and marital status). At the conclusion, they were provided with the MTurk code to obtain compensation, followed by a thank you message for participating in the study.

Each question in this study was timed, such that the “next” button in the page would appear only after a certain amount of time has passed. Several studies in psychology and consumer behavior mentioned using a timer in experimental studies enhances the credibility of data,

especially because the participants must pay attention to the experimental stimuli and questions (Barnhoorn et al., 2015; Feng, 2018; Land & Muntinga, 2014). The rationale behind using a timer in this study came from unsuccessful manipulation checks of the stimuli in the first round of the pre-test and partially successful manipulation check in the second round of a pre-test when all three modalities were considered, and no timer was used during study participation. Therefore, it was expected, that including a timer in the study and forcing participants to spend a specific amount of time for each question, would increase participants' attention and lead to successful manipulation of the stimuli to enhance data credibility. To determine the number of seconds needed for each question, the survey was timed and taken by the principal investigator. The minimum time to respond to each question was calculated by noting the time for clicking through the answers without reading the instructions/questions/items. The average time taken to respond to each of the questions was calculated in the following steps: (i) take the survey five times, after reading all the instructions/questions/items, (ii) note the time to complete each question for each of the five surveys, (noted time referred to duration of time between the first and last click on a page in the survey), (iii) add time used to complete the same question for all five surveys and dividing the result by five, and (iv) repeat all earlier steps for the remaining questions. The final timer for each question was set by adding five seconds to the calculated average time. The rationale behind adding five extra seconds to the timer for each question was due to the fact the survey was taken by the principal investigator, while calculating an average time. Given the principal investigator had a prior idea about the instructions/questions/items, this could potentially decrease the amount of time required to respond to each of the instructions/questions/items. Thus, attention was given to ensure the number of seconds for the timer was more than the calculated minimum time to respond to each question to decrease potential chances of click through responses.

Instruments

Structured questionnaires developed in Qualtrics were used to conduct these experimental studies (see Appendix H-K). All questions were close ended, except for age—asked as an open-ended question. The measurement scales used for the experiments were all adopted or adapted from extant measurement scales. All items for each measurement scale were randomized to minimize any potential order effects. A detailed description of the measurement scales is given in the Appendix B-D.

Chapter 4: Results

Chapter 4 discusses the different data analyses performed for the pre-tests, Study 1, and Study 2. Stimuli for Study 1 and Study 2 were finalized in pre-tests 1 and 2, respectively. After finalizing the stimuli through the pre-tests, Study 1 was administered followed by Study 2. For both pre-tests, Study 1, and Study 2, data cleaning was completed first. Any single case with more than 20% of the questions unanswered was discarded from further data analysis. The obvious straight liner responses (i.e., responding to or rating every question/item in the same way; Jones et al., 2015) were deleted from further analysis to reduce confounding effects in the findings. Next, variables were coded using Statistical Package for Social Sciences (SPSS; version 25). Items that were reverse-coded were re-coded to match the other items in the corresponding scale. Sample profiling, Exploratory Factor Analysis (EFA), ANOVA, MANCOVA, and student's *t*-test were performed using SPSS. Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) were performed using Mplus (version 8.4). The following are the individual details of data analyses for the pre-tests, Study 1, and Study 2.

Pre-test: Manipulation Check of Stimuli

The stimuli were finalized in two phases. After Pre-test 1, the stimuli for Study 1 were finalized. Based on the results of Pre-test 1, the stimuli for Study 2 were modified. The pre-tests were conducted with a student sample, recruited from undergraduate courses in the College of Human Sciences in a large southeastern university. The instructors of courses with more than 80 students were contacted with a survey invitation. Responses from students aged 19 years or older were included in the data. Students younger than 19 years were allowed to participate in the surveys, but their responses were not included in the data.

Before participating in the study, the participants read and consented to an IRB approved information letter. Students participated in the study in exchange for class credits. These pre-tests were conducted with structured questionnaires developed in Qualtrics. The questionnaires included the UCAs for Study 1 and Study 2, along with manipulation check questions and demographic questions (age, gender, ethnicity, annual household income, class standing). A separate survey was linked with the main survey, where participants were redirected to mention their names, course name, and course instructors to receive extra credits. Participants were randomly assigned to one of the stimuli from both Study 1 and Study 2.

In both Pre-test 1 and Pre-test 2, most of the participants were aged 19-25 years, female, Caucasian, and had an annual household income of $151,000 USD or more. A majority of the participants for Pre-test 1 and Pre-test 2 were sophomores and juniors, respectively (see Table 1).

Table 1

Demographic Characteristics of the Sample for Pre-test 1 and Pre-test 2

Measures	Categories	Frequency		%	
		Pre-test 1 (*n*=408)	Pre-test 2 (*n*=202)	Pre-test 1	Pre-test 2
Age (in years)	19-25	402	201	98.5	99.5
	26-32	5	1	1.1	.5
	32 and older	1	0	.2	0
Gender	Male	28	17	6.8	8.4
	Female	379	184	92.9	91.1
	Preferred not to say	1	1	.2	.5
Class standing	Freshman	136	19	33.3	9.4
	Sophomore	147	42	36	20.8
	Junior	88	71	21.6	35.1
	Senior	37	70	9.1	34.7
Annual household income (in USD)	30,000 or less	69	31	16.9	15.3
	31,000 to 60,000	26	6	6.4	3.0
	61,000 to 90,000	50	17	12.3	8.4
	91,000 to 120,000	76	24	18.6	11.9
	121,000 to 150, 000	48	36	11.8	17.8
	151,000 or more	139	88	34.1	43.6

Measures	Categories	Frequency		%	
		Pre-test 1 (*n*=408)	Pre-test 2 (*n*=202)	Pre-test 1	Pre-test 2
Ethnicity	Asian/Pacific Islander	24	7	5.9	3.5
	Caucasian	352	188	86.3	93.5
	African American	19	5	4.7	2.5
	Latino/Hispanic	11	2	2.7	0
	Other	2	1	.5	1.0

One-way ANOVA results indicated the three modalities (textual vs. visual vs. textual with visual) were significantly different from each other. Post-hoc tests were computed with Bonferroni corrections for pair-wise comparisons. The stimulus in textual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through textual information" than visual and textual with visual modalities (F = 142.35; p < .001). The stimulus for visual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through visuals" than textual and textual with visual modalities (F = 140.28; p < .001). The stimulus in textual with visual modality was rated significantly higher in the statement. "I think that the advertisement message is primarily conveyed through both visual and textual information" than textual and visual modalities (F = 58.56; p < .001) (see Table 2). The ratings were taken in a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Therefore, the manipulation check for the stimuli for Study 1 was successful for Pre-test 1 and finalized for Study 1 (see Appendix E).

Table 2

Manipulation Check Results for Stimuli for Study 1 from Pre-test 1

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
I think that the advertisement message is primarily	Visual	133	6.14	1.22	140.28	.00	**3.06 (M_V-M_T)**	**.00**
							1.02 (M_V-M_{TV})	**.00**
	Textual	132	3.08	1.80			-3.06 (M_T-M_V)	.00

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
conveyed through visuals.	Visual and Textual	143	5.12	1.47			-2.04 (M_T-M_{TV})	.00
							2.04 (M_{TV}-M_T)	.00
							-1.02 (M_{TV}-M_V)	.00
I think that the advertisement message is primarily conveyed through textual information.	Visual	133	2.44	1.55	142.35	.00	-3.22 (M_V-M_T)	.00
							-2.03 (M_V-M_{TV})	.00
	Textual	132	5.66	1.66			**3.22 (M_T-M_V)**	**.00**
							1.19 (M_T-M_{TV})	**.00**
	Visual and Textual	143	4.47	1.50			-1.19 (M_{TV}-M_T)	.00
							2.03 (M_{TV}-M_V)	.00
I think that the advertisement message is primarily conveyed through both visual and textual information.	Visual	133	3.59	1.66	58.56	.00	-.22 (M_V-M_T)	.76
							-1.90 (M_V-M_{TV})	.00
	Textual	132	3.82	1.71			.22 (M_T-M_V)	.76
							-1.67 (M_T-M_{TV})	.00
	Visual and Textual	143	5.49	1.43			**1.67 (M_{TV}-M_T)**	**.00**
							1.90 (M_{TV}-M_V)	**.00**

However, ANOVA and post-hoc tests with Bonferroni corrections indicated none of the concerns (affordability vs. social desirability vs. protecting environment) were significantly different from each other in Pre-test 1 (see Table 3). Therefore, the manipulation check for the concerns in the stimuli for Study 2 were unsuccessful during Pre-test 1. In terms of modalities, the stimulus in textual modality was determined significantly different from the stimuli in visual and textual with visual modalities. The stimulus in textual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through textual information" than visual and textual with visual modalities ($F = 16.42$; $p < .001$). The stimulus in visual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through visuals" than textual modality ($p < .001$), but not textual with visual modality ($p > .05$). The stimulus in textual with visual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through both visual and textual

information" than visual modality ($p < .001$), but not textual modality ($p > .05$). Therefore, the manipulation check for the modalities in the stimuli for Study 2 was partially successful in Pre-test 1 (see Table 4). Based on these results, the stimuli were modified and re-tested during Pre-test 2.

Table 3

Manipulation Check Results for Concerns in Stimuli for Study 2 from Pre-test 1

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
This webpage strongly reflects a concern for affordable sustainable apparel consumption.	Affordability	140	5.15	1.35	2.31	.10	**.36 (M_A-M_{SD})**	.11
							.25 (M_A-M_E)	.47
	Social Desirability	141	4.79	1.56			-.36 (M_{SD}-M_A)	.11
							-.11 (M_{SD}-M_E)	1.00
	Environment	127	4.90	1.43			-.25 (M_E-M_A)	.47
							.11 (M_E-M_{SD})	1.00
This webpage strongly reflects a concern for projecting oneself as ethical and responsible through sustainable apparel consumption.	Affordability	140	4.88	1.26	.38	.69	-.08 (M_A-M_{SD})	1.00
							-.15 (M_A-M_E)	1.00
	Social Desirability	141	4.96	1.54			**.08 (M_{SD}-M_A)**	1.00
							-.07 (M_{SD}-M_E)	1.00
	Environment	127	5.02	1.29			.15(M_E-M_A)	1.00
							.07 (M_E-M_{SD})	1.00
This webpage strongly reflects a concern for protecting environment through sustainable apparel consumption.	Affordability	140	5.46	1.34	.78	.46	-.18 (M_A-M_{SD})	.77
							-.17 (M_A-M_E)	.95
	Social Desirability	141	5.64	1.41			.18 (M_{SD}-M_A)	.73
							.02 (M_{SD}-M_E)	1.00
	Environment	127	5.62	1.27			**.17 (M_E-M_A)**	.95
							-.02 (M_E-M_{SD})	1.00

Table 4

Manipulation Check Results for Modalities for Stimuli for Study 2 from Pre-test 1

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
I think that the webpage is conveying	Visual	140	4.52	1.63	17.91	.00	**1.04 (M_V-M_T)**	**.00**
							.34 (M_V-M_{TV})	**.18**
	Textual	131	5.56	1.30			-1.04 (M_T-M_V)	.00

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
its message primarily through visuals.	Visual and Textual	137	5.22	1.42			-.70 (M_T-M_{TV})	.00
							.70 (M_{TV}-M_T)	.00
							-.34 (M_{TV}-M_V)	.18
I think that the webpage is conveying its message primarily through textual information.	Visual	140	4.89	1.50	16.42	.00	-1.08 (M_V-M_T)	.00
							-.52 (M_V-M_{TV})	.09
	Textual	131	3.81	1.57			**1.08 (M_T-M_V)**	**.00**
							.56 (M_T-M_{TV})	**.01**
	Visual and Textual	137	4.33	1.57			-.56 (M_{TV}-M_T)	.01
							.52 (M_{TV}-M_V)	.02
I think that the webpage is conveying its message primarily through both visual and textual information.	Visual	140	3.82	1.38	6.27	.02	-.41 (M_V-M_T)	.06
							-.61 (M_V-M_{TV})	.00
	Textual	131	3.59	1.56			.41 (M_T-M_V)	.06
							-.20 (M_T-M_{TV})	.75
	Visual and Textual	137	5.49	1.37			**.20 (M_{TV}-M_T)**	**.75**
							.61 (M_{TV}-M_V)	**.00**

Specifically, the dominant elements representing affordability (e.g., visuals of dollars, coins, piggy bank, and key words representing affordability), social desirability (e.g., visuals of social media platforms and modes of sharing, and key words representing social desirability), and protecting the environment (e.g., visuals for protecting the environment through recycling and using environmentally-friendly raw materials and key words representing the concern for protecting the environment) were identified from the existing stimuli for Study 2 and retained in the modified stimuli. Common elements representing sustainability in the stimuli, in general, (e.g., organic label, side bars, and top menus hinting the idea of sustainability) were eliminated. The rationale behind doing this came from the ANOVA results, which showed the participants perceived the stimuli primarily in terms of protecting the environment and social desirability for ethical consumption in the same manner, thereby creating an explicit overlap between the three concerns (see Table 3).

Even though the stimuli for Study 2 focused on sustainable apparel where the concerns for protecting the environment and consuming ethically are invariably linked, efforts were made to distinguish the three concerns in such a way that only one of the concerns is highlighted at a time in a single stimulus. For example, stimuli for affordability were modified by highlighting the concern for affordability and minimizing the concerns for protecting the environment and consuming ethically. Stimuli for protecting the environment were modified by highlighting the concern for protecting the environment and minimizing the concerns for affordability and consuming ethically. Stimuli for social desirability were modified by highlighting the concern for presenting oneself as ethical in the social setting and minimizing concerns for affordability and protecting the environment. Also, given a webpage format for the stimuli could bring unwanted overlaps between the three concerns, the modified stimuli were made in a format for a digital advertisement rather than a webpage.

To bring better clarity for the manipulation check items, the questions were re-worded as "More than anything else, this advertisement focuses on the need for buying apparel affordably," "More than anything else, this advertisement focuses on the need for sharing one's ethical buying to others," and "More than anything else, this advertisement focuses on the need for protecting the environment" for the concerns for affordability, social desirability, and protecting the environment, respectively. The modified stimuli (see Appendix F-G) for Study 2 were tested through Pre-test 2.

The initial data analysis of Pre-test 2 with ANOVA and post-hoc tests with Bonferroni corrections indicated the concerns of affordability and protecting the environment were significantly different from each other, thereby indicating successful manipulation checks for these two concerns. However, the concern for social desirability was marginally significantly different from the concern for affordability and not significantly different from the concern for protecting the

environment. Therefore, the manipulation check for the concerns were partially successful (see Table 5).

Table 5

Manipulation Check Results for Concerns in Stimuli for Study 2 from Pre-test 2

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
More than anything else, this advertisement focusses on the need for buying apparel affordably.	Affordability	69	4.65	1.56	20.10	.00	**1.48 (M_A-M_{SD})**	.00
							1.34 (M_A-M_E)	.00
	Social Desirability	69	3.17	1.47			-1.48 (M_{SD}-M_A)	.00
							-.14 (M_{SD}-M_E)	1.00
	Environment	64	3.31	1.49			-1.34 (M_E-M_A)	.00
							.14 (M_E-M_{SD})	1.00
More than anything else, this advertisement focusses on the need for sharing about one's ethical buying to others.	Affordability	69	4.06	1.44	2.76	.07	-.57 (M_A-M_{SD})	.08
							-.46 (M_A-M_E)	.24
	Social Desirability	69	4.62	1.54			**.57 (M_{SD}-M_A)**	.08
							.11 (M_{SD}-M_E)	1.00
	Environment	64	4.52	1.50			.46 (M_E-M_A)	.24
							-.11 (M_E-M_{SD})	1.00
More than anything else, this advertisement focusses on the need for protecting environment.	Affordability	69	4.99	1.53	17.82	.00	.46 (M_A-M_{SD})	.18
							-1.00 (M_A-M_E)	.00
	Social Desirability	69	4.52	1.67			-.46 (M_{SD}-M_A)	.18
							-1.46 (M_{SD}-M_E)	.00
	Environment	64	5.98	1.00			**1.00 (M_E-M_A)**	.00
							1.46 (M_E-M_{SD})	.00

In terms of modalities, the mean ratings for the item, "I think the advertisement message is primarily conveyed through visuals" was not significantly different from the UCAs in the visual and textual modalities. The modalities differed significantly from each other in terms of the items, "I think the advertisement message is primarily conveyed through textual information" and "I think the advertisement message is primarily conveyed through both textual information and visuals" (see Table 6).

Table 6

Manipulation Check Results for Modalities for Stimuli for Study 2 from Pre-test 2

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
I think that the advertisement message is primarily conveyed through visuals.	Visual	65	5.95	1.10	102.71	.00	**3.15 (M_V-M_T)**	**.00**
							.45 (M_V-M_{TV})	**.21**
	Textual	72	2.81	1.63			-3.15 (M_T-M_V)	.00
							-2.70 (M_T-M_{TV})	.00
	Visual and Textual	65	5.51	1.39			2.70 (M_{TV}-M_T)	.00
							.45 (M_{TV}-M_V)	.21
I think that the advertisement message is primarily conveyed through textual information.	Visual	65	3.03	1.71	65.80	.00	-3.03 (M_V-M_T)	.00
							-1.34 (M_V-M_{TV})	.00
	Textual	72	6.06	1.23			**3.03 (M_T-M_V)**	**.00**
							1.69 (M_T-M_{TV})	**.00**
	Visual and Textual	65	4.37	1.68			-1.69 (M_{TV}-M_T)	.00
							1.34 (M_{TV}-M_V)	.00
I think that the advertisement message is primarily conveyed through both visual and textual information.	Visual	65	3.80	1.53	25.46	.00	-.16 (M_V-M_T)	1.00
							-1.69 (M_V-M_{TV})	.00
	Textual	72	3.96	1.77			.16 (M_T-M_V)	1.00
							-1.53 (M_T-M_{TV})	.00
	Visual and Textual	65	5.49	1.09			**1.53 (M_{TV}-M_T)**	**.00**
							1.69 (M_{TV}-M_V)	**.00**

Looking at the results, an independent sample student's *t*-test was performed by selecting the stimuli for all the concerns only in textual and textual with visual modalities. The manipulation check worked successfully in terms of textual and textual with visual modalities (see Table 7). Also, the manipulation check in terms of concerns was successful when only the stimuli in textual and textual with visual modalities were selected. Given that modality was not our primary focus for the stimuli for Study 2, the stimuli only in textual, and textual with visual modalities were retained for Study 2. All concerns (i.e., affordability vs. social desirability vs. environment protection) were determined significantly different from each other when only these two modalities were considered. As an improvement from the initial ANOVA results with all the modalities, after selecting the

stimuli in textual and textual with visual modalities, the concerns for social desirability were significantly different from the concerns for affordability, and marginally significantly different from the concerns for protecting the environment (see Table 8). Therefore, these six stimuli (i.e., stimuli for the three concerns in textual and textual with visual modalities) were finalized for Study 2.

Table 7

Manipulation Check Results for Textual and Textual with Visual Modalities for Stimuli for Study 2 from Pre-test 2

DV	Stimuli	Descriptives			*t*-test		
		n	*M*	*SD*	*t*	*p*	Mean difference ($M_{Text} - M_{TextVis}$)
I think that the advertisement message is primarily conveyed through visuals.	Textual	72	2.81	1.10	-10.49	.00	-2.73
	Visual and Textual	66	5.53	1.39			
I think that the advertisement message is primarily conveyed through textual information.	Textual	72	6.06	1.71	6.87	.00	1.72
	Visual and Textual	66	4.33	1.68			
I think that the advertisement message is primarily conveyed through both visual and textual information.	Textual	72	3.96	1.53	-5.86	.00	-1.50
	Visual and Textual	66	5.45	1.09			

Table 8

Manipulation Check Results for Concerns in Stimuli with Textual and Textual with Visual Modalities for Study 2 from Pre-test 2

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
More than anything else,	Affordability	47	4.77	1.54	15.83	.00	**1.37 (M_A-M_{SD})**	.00
							1.67 (M_A-M_E)	.00

this advertisement focusses on the need for buying apparel affordably.	Social Desirability	48	3.40	1.46			-1.37 (M_{SD}-M_A)	.00
							.30 (M_{SD}-M_E)	1.00
	Environment	43	3.09	1.57			-1.67 (M_E-M_A)	.00
							-.30 (M_E-M_{SD})	1.00
More than anything else, this advertisement focusses on the need for sharing about one's ethical buying to others.	Affordability	47	4.21	1.49	4.18	.02	-.83 (M_A-M_{SD})	.02
							-.16 (M_A-M_E)	1.00
	Social Desirability	48	5.04	1.32			**.83 (M_{SD}-M_A)**	.02
							.67 (M_{SD}-M_E)	.10
	Environment	43	4.37	1.63			.16 (M_E-M_A)	1.00
							-.67 (M_E-M_{SD})	.10
More than anything else, this advertisement focusses on the need for protecting environment.	Affordability	47	5.15	1.53	8.47	.00	.27 (M_A-M_{SD})	1.00
							-.87 (M_A-M_E)	.01
	Social Desirability	48	4.88	1.48			-.27 (M_{SD}-M_A)	1.00
							-1.15 (M_{SD}-M_E)	.00
	Environment	43	6.02	1.04			**.87 (M_E-M_A)**	.01
							1.15 (M_E-M_{SD})	.00

Study 1

Demographics. A total of 432 responses were collected from MTurk; 88 responses were deleted due to straight line responses and participants younger than 24 or older than 39 years. Therefore, 344 was the useable sample size. Most of the participants were in the age group 30-35 years (f = 146; 42.5%), had a 4-year college degree (f = 155; 45.1%) and an annual household income between 31,000 to 60,000 USD (f = 117; 34%), were married (f = 172; 50%), employed for wages (f = 251; 73%), and Caucasian (f = 260; 75.6%). Other details about the participants' demographic characteristics are provided in Table 9. According to the Pew Research Center (2020), in 2018 around 8, 25, 28, and 39% of millennials in the U.S. had an education qualification of less than high school graduation, high school graduation, some college, and bachelor's degree or higher, respectively. Therefore, the sample for this study was slightly more educated than the U.S.

national population (see Table 9). Around 72% of female millennials of the U.S. were employed in 2018 (Pew Research Center, 2020). This closely resonates with the employment status of the sample of this study (see Table 9). Median annual earnings among full-time working millennials in the U.S. in 2018 was in the range 31,300 to 56, 000 USD (Pew Research Center, 2020). This closely resembles this study's sample (see Table 9). Of millennials in the U.S. in 2018, 46% were married. The percentage of married individuals in this study is slightly higher than the national population of millennials in the U.S. (see Table 9). Overall, although the demographic characteristics of the sample for this study are not exactly like the national population of the millennials in the U.S., they closely resemble them.

Table 9

Demographic Characteristics of the Sample for Study 1 and Study 2

Measures	Categories	Frequency		%	
		Study 1 (*n*=344)	Study 2 (*n*= 392)	Study 1	Study 2
Age (in years)	24-29	104	165	30.2	42.1
	30-35	146	165	42.5	42.1
	36-39	94	62	27.3	15.9
Gender	Male	0	208	0	53.1
	Female	344	183	100	46.7
	Preferred not to say	0	1	0	.3
Highest level of educational qualification	Some high school	4	3	1.2	.8
	High school degree	57	52	16.6	13.3
	Some college or technical school	45	31	13.1	7.9
	College degree (4 years)	155	196	45.1	50.0
	Some graduate school	18	29	5.2	7.4
	Graduate degree (Master's, doctorate, etc.)	65	81	18.9	20.7
Annual household income (in USD)	30,000 or less	63	75	18.3	19.1
	31,000 to 60,000	117	130	34.0	33.2
	61,000 to 90,000	95	98	27.6	25.0
	91,000 to 120,000	46	59	13.4	15.1
	121,000 to 150, 000	11	21	3.2	5.4
	151,000 or more	12	9	3.5	2.3

Measures	Categories	Frequency		%	
		Study 1 (*n*=344)	Study 2 (*n*= 392)	Study 1	Study 2
Marital status	Single, never married	152	172	44.2	43.9
	Married	172	208	50.0	53.1
	Divorced	13	8	3.8	2.0
	Separated	4	2	1.2	.5
	Cohabitating	2	2	.6	.5
	Dating	1	0	.3	0
Employment status	Currently unemployed	21	33	6.1	8.4
	Employed for wages	251	285	73.0	72.7
	Self-employed	29	55	8.4	14.0
	Homemaker	30	10	8.7	2.6
	Student	9	6	2.6	1.5
	Full-time employee	1	0	.3	0
	Disabled	3	1	.9	.3
	Laid off	0	1	0	.3
	Freelancer	0	1	0	.3
Ethnicity	Asian/Pacific islander	33	41	9.6	10.5
	Caucasian	260	249	75.6	63.5
	African American	28	52	8.1	13.3
	Latino/Hispanic	16	45	4.7	11.5
	Mixed/Biracial	6	5	1.7	1.3
	Other	1	0	.3	0

Manipulation check. ANOVA and post-hoc tests with Bonferroni corrections indicated all modalities (textual vs. visual vs. textual with visual) were significantly different from each other. The stimulus in visual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through visuals" than textual and textual with visual modalities ($F = 88.18$; $p < .001$). The stimulus in textual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through textual information" than visual and textual with visual modalities ($F = 83.76$; $p < .001$). The stimulus in textual with visual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through both visual and textual information" than

textual and visual modalities ($F = 36.17$; $p < .001$). Therefore, the manipulation checks for the three modalities were successful (see Table 10).

Table 10

Manipulation Check Results for the Stimuli for Study 1

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
I think that the advertisement message is primarily conveyed through visuals.	Visual	117	5.95	1.22	88.18	.00	**2.56 (M_V-M_T)**	**.00**
							1.11 (M_V-M_{TV})	**.00**
	Textual	117	3.39	1.69			-2.56 (M_T-M_V)	.00
							-1.44 (M_T-M_{TV})	.00
	Visual and Textual	110	4.84	1.48			1.44 (M_{TV}-M_T)	.00
							-1.11 (M_{TV}-M_V)	.00
I think that the advertisement message is primarily conveyed through textual information.	Visual	117	2.97	1.85	83.76	.00	-2.70 (M_V-M_T)	.00
							-1.16 (M_V-M_{TV})	.00
	Textual	117	5.67	1.26			**2.70 (M_T-M_V)**	**.00**
							1.54 (M_T-M_{TV})	**.00**
	Visual and Textual	110	4.13	1.64			-1.54 (M_{TV}-M_T)	.00
							1.16 (M_{TV}-M_V)	.00
I think that the advertisement message is primarily conveyed through both visual and textual information.	Visual	117	3.68	1.81	36.17	.00	-.44 (M_V-M_T)	.13
							-1.78 (M_V-M_{TV})	.00
	Textual	117	4.12	1.70			.44 (M_T-M_V)	.13
							-1.34 (M_T-M_{TV})	.00
	Visual and Textual	110	5.46	1.34			**1.34 (M_{TV}-M_T)**	**.00**
							1.78 (M_{TV}-M_V)	**.00**

Central tendency, reliability and validity of scales. All measurement scales showed an acceptable central tendency with skewness and kurtosis below -2, +2, respectively. Studies mentioned perfectly normal data are difficult to obtain and unreal for many cases. As such, with a skewness and kurtosis below -2, +2, respectively, normality can be assumed (Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006). Therefore, normality was assumed for all scales in Study 1. All measurement scales showed adequate reliability and validity (see Tables 11 and 12). EFA was performed using SPSS with principal components analysis and the varimax method. The number of factors were identified from the scree plots. The EFA indicated a unidimensional factor structure for involvement with environmental issues (Env), purchase intention for sustainable apparel (PI), central processing (Cent), fashion innovativeness (Fash), affordability (Aff), and need for cognition (NFC) and bi-dimensional factor structure for affective response (desire and boredom as two factors) and peripheral processing (processing on the basis of attractiveness and effortless processing as two factors) as expected.

CFA was performed using Mplus (version 8.4). Resulting CFA fit were analyzed in terms of χ^2/df, root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker Lewis fit index (TFI), and standardized root mean square residual (SRMR). A χ^2/df ratio < 3, RMSEA < .07, CFI and TLI > .90, and SRMR < .08 are suggested as indicators of good model fit (Hooper et al., 2008). The CFA indicated the measurement model fit the data well (χ^2 = 1971.55, *df* = 1082, $p < .001$; χ^2 / *df* = 2.28; RMSEA = .05; CFI =.93, TLI = .93, SRMR = .04). Factor loadings of all items for all the scales were greater than .71. Any item with a factor loading less than .40 is considered unreliable (Fornell & Larcker, 1981; Hooper, 2012). Therefore, the factor loadings for all items of all scales were deemed acceptable. Cronbach's alpha and composite reliability were

greater than .74 for all scales. A reliability above .70 is deemed acceptable (Hooper, 2012). Therefore, all scales indicated adequate reliability (see Table 11).

Table 11

Measurement Scale Items with their Factor Loadings from Confirmatory Factor Analysis (CFA), Average Variance Extracted (AVE), and Reliabilities for Study 1

Items	CFA Factor loadings	AVE	Composite reliability	Cronbach's alpha
Involvement with environmental issues (Env)		.58	.95	.94
1. I feel a personal obligation to do whatever I can to prevent climate change.	.87			
2. I feel a sense of personal obligation to take action to stop the disposal of toxic substances in the air, water, and soil.	.83			
3. People like me should do whatever we can to prevent loss of tropical forests.	.80			
4. Climate change will be very serious problem for me and my family.	.76			
5. I am very concerned about the environment.	.86			
6. I would be willing to reduce my consumption to help protect the environment.	.81			
7. Protecting the natural environment increases my quality of life.	.78			
8. I would avoid buying clothing items if it had potentially harmful environmental effects.	.72			
9. Supporting environment protection makes me more committed to the environment.	.88			
Purchase intention (PI)		.73	.93	.93
1. I want to buy a sustainable apparel because it reduces my impact on environment.	.84			
2. Instead of paying for 2-3 apparel, I would like to buy one sustainable apparel as shown in the advertisement and wear it for a long time.	.84			

Items	CFA Factor loadings	AVE	Composite reliability	Cronbach's alpha
3. Instead of paying for 2-3 apparel, I would like to buy one sustainable apparel as shown in the advertisement and wear it in different styles.	.82			
4. I will likely buy sustainable apparel in future.	.89			
5. I will definitely buy sustainable apparel.	.89			
Desire toward sustainable apparel		.58	.74	.74
1. I felt very desirous.	.78			
2. I felt very full of craving.	.74			
Boredom toward sustainable apparel		.66	.80	.79
3. I felt very bored.	.76			
4. I felt very unimpressed.	.87			
Central processing (Cent)		.61	.92	.92
1. I am attempting to analyze the issue in the advertisement message.	.74			
2. I am deep in thought about the message presented in the advertisement.	.85			
3. I am extending a good deal of thinking about the advertisement message.	.85			
4. I am really exerting my mind about the advertisement message.	.79			
5. I am doing my best to think about the advertisement message.	.72			
6. I am reflecting on the implications of the arguments made in the advertisement message.	.74			
7. I am searching my mind in response to the ideas presented in the advertisement.	.79			
Peripheral processing on the basis of attractiveness (Peri1)		.67	.80	.79
1. Overall attractiveness of this advertisement is very important for me while I am evaluating it.	.90			
2. I am evaluating the advertisement largely on the basis of its attractiveness.	.72			
Peripheral processing in terms of effortless processing (Peri2)		.66	.92	.92
3. I am effortlessly trying to relate how the advertisement matches with my own self-image.	.89			

Items	CFA Factor loadings	AVE	Composite reliability	Cronbach's alpha
4. I am effortlessly trying to relate how the advertisement matches my taste for apparel.	.71			
5. I am effortlessly trying to relate how the advertisement matches with my mood.	.72			
6. I am effortlessly trying to relate how the advertisement matches with the way I see myself.	.86			
7. I am effortlessly trying to relate how the advertisement matches with who I am.	.84			
8. I am effortlessly trying to relate how the advertisement can mirror my image.	.84			
Fashion innovativeness (Fash)		.54	.96	.95
1. Compared to my friends, I own very new fashion clothes.	.82			
2. I know the names of new fashion designers before other people do.	.82			
3. If I heard that new fashion clothes were available in store, I would be interested enough to buy it.	.81			
4. I will buy new fashion clothes even if I have not seen it before.	.73			
5. Fashionable, attractive clothing is very important to me.	.75			
6. Keeping up with the latest fashion is important to me.	.89			
7. I spend considerable time and effort to learn about the latest fashion.	.86			
8. I keep wardrobe up to date with the changing fashions.	.88			
9. I usually have one or more outfits of the very new fashion.	.85			
10. I consciously choose something that reflects the current fashion.	.82			
Affordability (Aff)		.63	.96	.95
1. I do not buy apparel when they cost too much.	.92			
2. I will not buy apparel if they cost too much.	.94			
3. I will probably not buy apparel if they cost too much.	.89			
4. I will definitely not buy apparel if they cost too much.	.89			

Items	CFA Factor loadings	AVE	Composite reliability	Cronbach's alpha
Need for cognition (NFC)		.67	.80	.80
1. I would prefer complex to simple problems.	.87			
2. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	.77			

Convergent validity (i.e., "level of correlation of multiple indicators of the same construct that are in agreement" Hamid et al., 2017, p. 2) of the measurement scales were checked in terms of factor loadings of the items, composite reliability, and average variance extracted (AVE). AVE should be more than .50 to establish convergent validity (Fornell & Larcker, 1981; Hamid et al., 2017). Average Variance Extracted (AVE) was greater than .50 for each scale, indicating adequate convergent validity (see Table 11).

Discriminant validity is "the extent in which the construct actually differs from one another empirically" (Hamid et al., 2017, p. 2). The square root of the AVE should be greater than the inter-construct correlations to establish discriminant validity (Fornell & Larcker, 1981; Hamid et al., 2017). The square root of the AVEs were greater than the inter-construct correlations for each variable, thereby indicating adequate discriminant validity (see Table 12).

Table 12

Mean, Standard Deviation, and Correlations of the Research Variables for Study 1

Variables	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Env	5.33	1.23	**.76**									
2. PI	5.07	1.29	.72**	**.85**								
3. Desire	3.82	1.45	.38**	.43**	**.76**							
4. Boredom	3.14	1.55	-.49**	-.53**	-.29	**.81**						

Variables	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
5. Cent	4.84	1.23	.37**	.42**	.41**	-.25**	**.78**					
6. Peri1	4.97	1.29	.18**	.17**	.23**	-.09	.35**	**.82**				
7. Peri2	4.69	1.23	.33**	.37**	.36**	-.19**	.35**	.46**	**.81**			
8. Fash	3.45	1.48	.10	.15**	.33**	-.00	.19**	.28**	.27**	**.73**		
9. Aff	5.85	1.35	-.11*	-.13*	-.17**	.14**	-.08	-.11*	-.06	-.49**	**.79**	
10. NFC	4.37	1.46	.18**	.13*	.13*	.06	.28**	.20**	.09	.04	-.06	**.82**

Note: *Note.* The bold numbers in the diagonal represent the square root of the AVE of each of the research variables. All the square roots of AVE were much higher than the correlations in the respective columns, indicating that the research variables had adequate discriminant validity. ***p* < .01, **p* < *.05*.

Hypotheses testing. To test H1-H4, MANCOVA was performed with Env and modality as fixed factors, Fash, Aff, and NFC as covariates, and Cent, Peri1 (peripheral processing on the basis of attractiveness of the UCA), and Peri2 (peripheral processing on the basis of effortless processing of the UCA) as dependent variables. The rationale behind performing MANCOVA instead of ANCOVA was due to the significant correlations between the dependent variables (see Table 12). This rationale takes support from the literature suggesting if the variables are significantly correlated, MANCOVA should be performed, instead of ANCOVA (Tabachnick et al., 2007; Weinfurt, 1995). The test was performed at .05 significance level. Participants were divided into high- and low-involvement groups for Env through the median split method. This kind of grouping using the median split method has been used in many studies (e.g., Bhutada et al., 2017; Braverman, 2008).

Multivariate effects results indicated Fash (F (3, 333) = 12.29, $p < .001$; Wilk's $\lambda = .90$, partial $\eta^2 = .10$, observed power = 1.00) and NFC (F (3, 333) = 10.77, $p < .001$; Wilk's $\lambda = .91$, partial $\eta^2 = .09$, observed power = 1.00) covaried significantly with the dependent variables, but Aff did not (F (3, 333) = 1.02, $p = .38$; Wilk's $\lambda = .99$, partial $\eta^2 = .01$, observed power = .28). Tests of

between-subjects effects indicated Fash covaried significantly with Cent (F = 10.73, df = 1, p < .001; partial η^2 = .03, observed power = .90), Peri1 (F = 23.62, df = 1, p < .001; partial η^2 = .07, observed power = 1.00), and Peri2 (F = 25.33, df = 1, p < .001; partial η^2 = .07, observed power = 1.00). Therefore, Fash could significantly influence the effects of Env and modality on Cent, Peri1, and Peri2. NFC significantly covaried with Cent (F = 27.55, df = 1, p < .001; partial η^2 = .08, observed power = 1.00) and Peri1 (F = 11.20, df = 1, p < .001; partial η^2 = .03, observed power = .92), but not Peri2 (F = 1.67, df = 1, p = .20; partial η^2 = .01, observed power = .25). Therefore, NFC could significantly influence the effects of Env and modality on Cent and Peri1, but not on Peri2. Aff marginally covaried with Peri2 (F = 2.97, df = 1, p = .09; partial η^2 = .01, observed power = .40), but not Peri1 (F = .60, df = 1, p = .44; partial η^2 = .00, observed power = .13) and Cent (F = 2.97, df = 1, p = .09; partial η^2 = .01, observed power = .12). Therefore, Aff could influence the effects of Env and modality on Peri2 to a certain extent, but not on Peri1 and Cent.

As such, controlling the aforementioned effects of Fash, NFC, and Aff, the multivariate effects results indicated Env (F (3, 333) = 11.27, p < .001; Wilk's λ = .91, partial η^2 = .09, observed power = 1.00) and modality (F (6, 666) = 3.87, p < .001; Wilk's λ = .93, partial η^2 = .03, observed power = .97) had significant main effects on the dependent variables. Tests of between-subjects effects indicated Env had a significant main effect on Cent (F = 30.74, df = 1, p < .001; partial η^2 = .08, observed power = 1.00), Peri1 (F = 6.35, df = 1, p < .05; partial η^2 = .02, observed power = .71), and Peri2 (F = 10.19, df = 1, p < .01; partial η^2 = .03, observed power = .89). Therefore, there was a significant difference in the means of Cent, Peri1, and Peri2 between the high and low levels of Env. Modality had a significant main effect on Cent (F = 6.15, df = 2, p < .01; partial η^2 = .04, observed power = .89) and a marginal significant effect on Peri1 (F = 2.65, df = 2, p = .07; partial η^2 = .02, observed power = .52). Modality had no significant main effect on Peri2 (F = 1.02, df = 2,

p = .36; partial η^2 = .01, observed power = .23). Therefore, there was a significant difference in the means for Cent, a marginal significant difference in the means for Peri1, and no significant difference in the means for Peri2 between the three modalities.

Multivariate effects results indicated Env and modality did not have a significant interaction effect on the dependent variables (F (6, 666) = 1.39, p = .22; Wilk's λ = .98, partial η^2 = .01, observed power = .55). Tests of between-subjects effects indicated Env and modality had a significant interaction effect on Cent (F = 3.97, df = 2, p < .05; partial η^2 = .02, observed power = .71), but not on Peri1 (F = .53, df = 2, p = .59; partial η^2 = .00, observed power = .13), and Peri2 (F = .16, df = 2, p = .85; partial η^2 = .00, observed power = .08). Therefore, the effects of the three modalities on Cent could significantly differ as a function of low and high levels of Env.

Cent, Peri1, and Peri2 were measured using a 7-point Likert scale (1 = Strongly Disagree; 7 = Strongly Agree)—4 was the neutral point. Therefore, a mean score significantly above 4 will indicate an increase in Cent, Peri1, and Peri2. One sample student's t-test indicated the mean scores for Cent (t = 12.69, df = 343, p <.001; M = 4.84, SD = *1.23*, MD = .84), Peri1 (t = 14.03, df = 343, p <.001; M = 4.97, SD = *1.29*, MD = .97), and Peri2 (t = 10.40, df = 343, p <.001; M = 4.69, SD = *1.23*, MD = .69) were significantly higher than 4. Figure 6 results derived from MANCOVA indicate that when the modality was textual, estimated marginal means of Cent was 4.55 (M = 4.46, SD = 1.86) and 5.44 (M = 5.46, SD = .95) for low and high level of Env, respectively. Therefore, although Cent was higher when Env was high, textual modality increased central processing of the UCA, irrespective of the level of Env. This supports H1. Figures 7 and 8 results derived from MANCOVA indicate the estimated marginal means (EMM) of peripheral processing of textual modality in terms of attractiveness (EMM = 4.41, M = 4.43, SD = 1.38) and effortless processing (EMM = 4.53, M = 4.33, SD = 1.21) are less than 4.55 (i.e., the EMM of Cent) when Env is low.

Similarly, when Env is high, the estimated marginal means of peripheral processing of textual modality in terms of attractiveness (*EMM* = 4.99, *M* = 5.00, *SD* = 1.30) and effortless processing (*EMM* = 4.82, *M* = 4.82, *SD* = 1.18) are less than 5.44 (i.e., the *EMM* of Cent). It further corroborates that irrespective of the level of Env, textual modality increased central processing of UCA, thereby further supporting H1.

Figure 6 indicates when UCA was presented in visual modality, the estimated marginal mean of Cent was higher (*EMM* = 4.99, *M* = 5.08, *SD* = 1.30) when Env was high as compared to when Env was low (*EMM* = 4.07, *M* = 4.06, *SD* = 1.38). Therefore, when Env was high, visual modality increased central processing of UCA, thereby supporting H2. The estimated marginal mean of Cent was higher than the estimated marginal mean of Peri2 (*EMM* = 4.89, *M* = 4.92, *SD* = 1.25) for visual modality, when the Env was high, thereby further supporting H2. However, the estimated marginal mean of Cent was lower than the estimated marginal mean of Peri1 (*EMM* = 4.89, *M* = 5.31, *SD* = 1.02) for visual modality, when the Env was high (see Figure 7). This indicates although visual modality increased central processing of UCA, peripheral processing also occurred, especially on the basis of attractiveness of the UCA. This may imply the visuals in the UCA first increase peripheral processing on the basis of attractiveness of the UCA, followed by an initial effortless processing and then a final intense central processing, when Env is high.

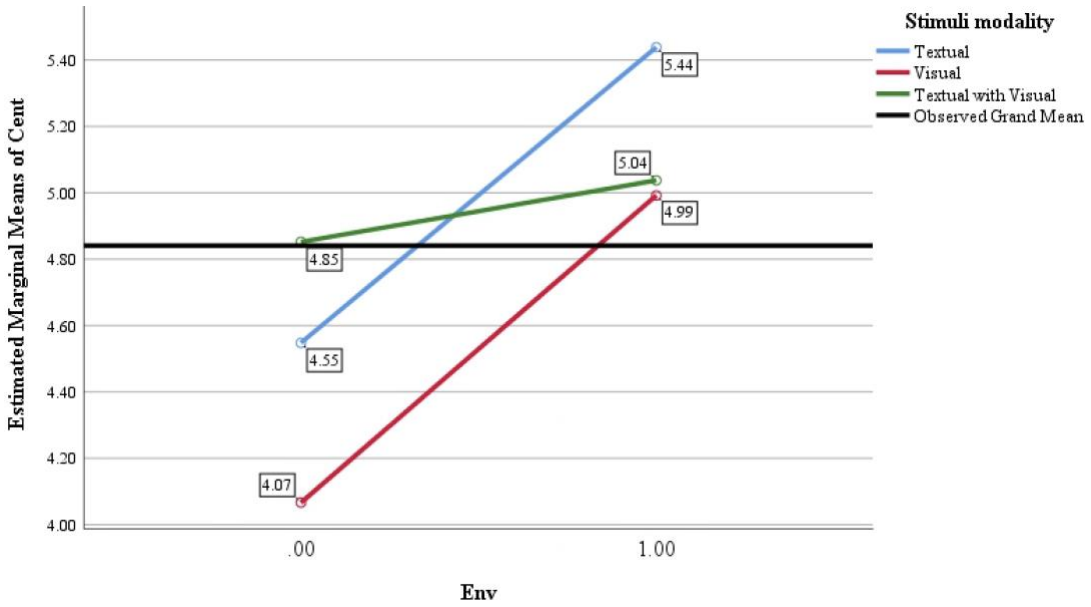

Figure 6. Plot indicating the influence of three modalities on central processing (Cent), as a function of low (.00) and high (1.00) levels of involvement with environmental issues (Env).

When Env was low, the estimated marginal means of Peri1 (*EMM* = 4.92, *M* = 4.91, *SD* = 1.27) and Peri2 (*EMM* = 4.38, *M* = 4.39, *SD* = 1.32) for visual modality was greater than the neutral score of 4 (see Figures 7 and 8), thereby indicating visual modality increased peripheral processing of UCA. Both scores were higher than the estimated marginal mean of central processing of visual modality (*EMM* = 4.07, *M* = 4.06, *SD* = 1.38), when Env was low. This supports H3, indicating when Env is low, visual modality increases peripheral processing. However, peripheral processing on the basis of attractiveness seems more important than effortless processing when Env is low and UCA is presented through visual modality.

Figure 6 indicates the estimated marginal means for central processing of textual with visual modality for both low (*EMM* = 4.85, *M* = 4.79, *SD* = 1.04) and high (*EMM* = 5.04, *M* = 5.09, *SD* = 1.31). Env is above the neutral score of 4, thereby indicating irrespective of the level of Env, textual with visual modality increased central processing of UCA. This supports H4. The estimated marginal mean of Cent was higher than the estimated marginal mean of Peri2 (*EMM* = 4.66, *M* =

4.79, *SD* = 1.04) when Env was low, thereby further corroborating H4 (see Figure 8). Similarly, the estimated marginal mean for Cent was higher than the estimated marginal mean for Peri2 (*EMM* = 4.98, *M* = 5.05, *SD* = 1.22), when Env was high, thereby further corroborating H4 (see Figure 8). Interestingly, the mean scores for Peri1 were higher than the mean scores for Cent, when Env was low (*EMM* = 4.98, *M* = 4.91, *SD* = 1.21) and high (*EMM* = 5.10, *M* = 5.18, *SD* = 1.30) (see Figure 7). This indicates while textual with visual modality increases central processing of UCA, irrespective of the level of Env, peripheral processing may also occur, in terms of processing UCA on the basis of attractiveness. Similar to the processing of visual modality, UCA presented through textual with visual modality may first increase peripheral processing on the basis of attractiveness, irrespective of the level of Env. After this, it may first kindle an effortless processing of the UCA, followed by intense central processing, for both when Env is high and low.

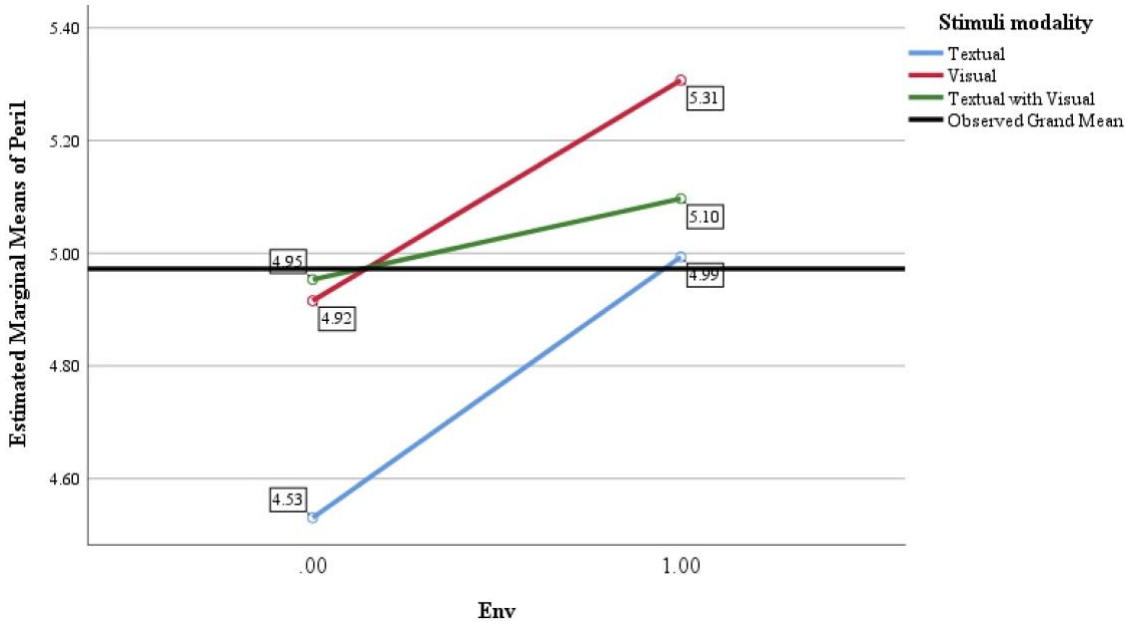

Figure 7. Plot indicating the influence of three modalities on Peri1 (peripheral processing on the basis of attractiveness), as a function of low (.00) and high (1.00) levels of Env (involvement with environmental issues).

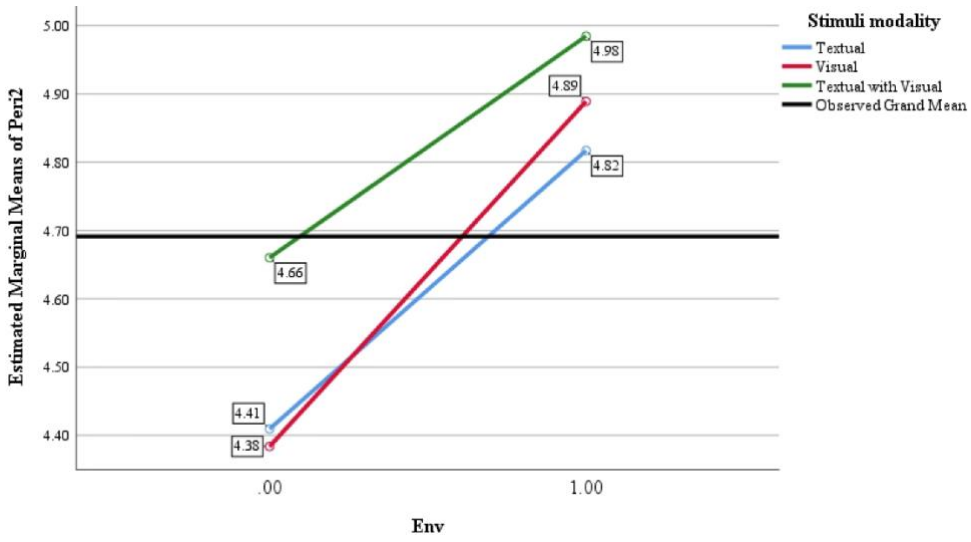

Figure 8. Interaction plot indicating the influence of three modalities on Peri2 (peripheral processing in terms of effortless processing), as a function of low (.00) and high (1.00) levels of Env (involvement with environmental issues).

Additionally, a one-way ANOVA was performed with modality and Cent as the independent and dependent variables, respectively, to analyze the underlying contrast effects (F = 2.80, p = .06). A simple contrast test (contrast coefficient 1, -1, and 0 for textual, visual, and textual with visual modalities, respectively) indicated a significant difference in the means of Cent between the textual and visual modalities (t = 2.25, df = 341, p < .05), where the means for Cent for textual modality was higher than the means for Cent for visual modality. This further supports earlier findings that textual modality increases central processing of UCA. Another simple contrast test (contrast coefficient 1, 0, and -1 for textual, visual, and textual with visual modalities, respectively) indicated no significant difference in the means for Cent between the textual and textual with visual modalities (t = .48, df = 341, p = .63). This further supports H1 and H4, that both textual and textual with visual modalities increase central processing; thus, not significantly different in their potential for increasing central processing of UCA.

Another simple contrast test (contrast coefficient 0, 1, and -1 for textual, visual, and textual with visual modalities, respectively) indicated a marginal significant difference in the means for Cent among the visual and textual with visual modalities (t = -1.74, df = 341, p = .08). This indicates the potential of visual and textual with visual modalities for increasing central processing of UCA may not differ to a great extent. Figure 6 indicates the estimated marginal mean for Cent for visual (*EMM* = 4.99, M = 5.07, SD = 1.09) and textual with visual modality (*EMM* = 5.04, M = 5.09, SD = 1.31) were very close when Env was high. However, when Env was low, estimated marginal means of textual with visual modality (*EMM* = 4.85, M = 4.79, SD = 1.04) was higher than visual modality (*EMM* = 4.07, M = 4.06, SD = 1.38). These findings, along with the plot from Figure 6, imply while a high Env encourages central processing of UCA both in visual and textual with visual modalities, the textual information in the textual with visual information aids to increase central processing of UCA, even when Env is low.

Another one-way ANOVA was performed with modality and Peri1 as the independent and dependent variables, respectively, to analyze the underlying contrast effects (F = 3.45, p < .03). A simple contrast test (contrast coefficient 1, -1, and 0 for textual, visual, and textual with visual modalities, respectively) indicated a significant difference between the means for Peri1 among the textual and visual modalities (t = 2.59, df = 341, p < .01), where the means for Peri1 for visual modality was higher than the means of Peri1 for textual modality. This further supports visual modality increases peripheral processing of UCA. Therefore, H1-H4 were supported.

To test H10, a one-way ANOVA was performed with modality as the independent variable and PI as the dependent variable. The test was performed at the .05 significance level. Modality did not have a significant main effect on PI (F(2, 241) = .28, p = .75). Therefore, there was no significant difference in the means for PI between the three modalities. H10 was rejected. Given PI

was measured on a 7-point Likert scale (1 = Strongly Disagree; 7 = Strongly Agree), 4 was the neutral point. Therefore, a mean score significantly above 4 will indicate an increase for PI. One sample student's *t*-test indicated the mean scores for PI ($t = 15.41$, $df = 343$, $p < .001$; $M = 5.07$, $SD = 1.29$, $MD = 1.07$) were significantly higher than 4. Therefore, there was a significant increase in the mean score of PI from the neutral point of 4, indicating an increase in purchase intention for sustainable apparel. However, univariate analysis of variance performed with PI as the dependent variable, modality as the fixed factor, and Fash, Aff, and NFC as the covariates indicated Fash ($F = 3.14$, $p = .08$) covaried with PI marginally significantly, Aff did not covary with PI significantly ($F = 1.51$, $p = .22$), and NFC covaried with PI significantly ($F = 26.20$, $p < .001$). As such, even when the influence of Fash and NFC on PI was controlled, there was no significant difference in the means of PI between the three modalities ($F = .55$, $p = .58$). Figure 9 derived from the results of univariate analysis of variance indicates when UCA was presented in textual ($EMM = 5.17$, $M = 5.14$, $SD = 1.27$), visual ($EMM = 5.05$, $M = 5.06$, $SD = 1.28$), and textual with visual modalities ($EMM = 4.99$, $M = 5.01$, $SD = 1.32$), the *EMM*s of PI were very close to each other. Although, it seems visually the *EMM* of PI was higher when the UCA was present in textual modality, followed by visual and textual with visual modalities (see Figure 9), the difference between the *EMM*s of PI for the three modalities were insignificant. Therefore, all three modalities have the potential to increase PI for sustainable apparel and no one modality is more effective to increase the PI than the other two modalities, thereby rejecting Hl0.

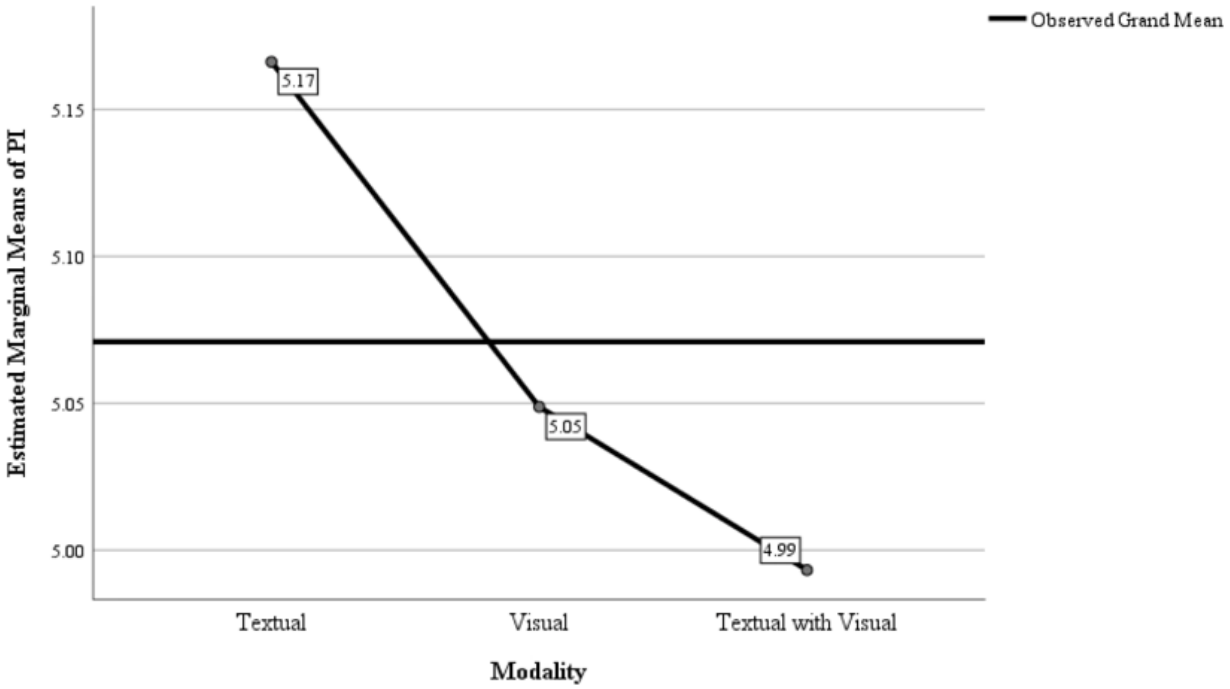

Figure 9. Plot indicating the estimated marginal means of purchase intention (PI) between the three modalities.

SEM was performed using MPlus (version 8.4) to test H5-H9 and the overall feasibility of the conceptual model (see Table 13). Four models were run successively to test these hypotheses and bring confidence to explain the feasibility of the conceptual model. Adjustments were made in the models by covarying the residuals of those items, which had inter-item standardized residual covariations > 5. The models were calculated using the Maximum Likelihood method, 10,000 iterations, .00005 convergence, and 1,000 Bootstrap. Scores of the manipulation check items for the three modalities were used as a proxy to represent the three modalities. The score of the items, "I think the advertisement message is primarily conveyed through textual information" represented textual modality, "I think the advertisement message is primarily conveyed through visuals" represented visual modality, and "I think the advertisement message is primarily conveyed through both textual information and visuals" represented textual with visual modality. The rationale behind doing this came from the successful manipulation of the three modalities, thereby indicating the

textual information was significantly more in textual modality than visual or textual with visual modalities; visuals were significantly more in the visual modality than textual or textual with visual modalities; and both textual information and visuals were significantly more in the textual with visual modality than textual or visual modalities.

Table 13

Path Coefficients and Significant Test Results for Study 1

Model	Model 1	Model 2	Model 3	Model 4
Paths	Main effect	Mediation without interaction	Interaction effect	Mediation with interaction
Cent → Desire (H5)	.37***	.37***	.38***	.38†
Peri1 → Desire (H6)	-.10	-.10	-.12	-.12
Peri2 → Desire (H6)	.38***	.38***	.39***	.39
Cent → Boredom (H5)	-.27***	-.27**	-.29***	-.29
Peri1 → Boredom (H6)	.06	.06	.08	.08
Peri2 → Boredom (H6)	-.17*	-.17†	-.19*	-.19
Desire → PI (H9)	.40***	.40***	.40***	.40*
Boredom → PI (H9)	-.46***	-.46***	-.46***	-.46**
Man_T → Cent (H1)	.15*	.15*	.13*	.13*
Man_V → Cent (H2)	.23***	.23***	.23***	.23***
Man_TV → Cent (H4)	.20***	.20**	.17***	.17**
Man_T x Env → Cent	-	-	-.06	-.06
Man_V x Env → Cent	-	-	-.04	-.04
Man_TV x Env → Cent	-	-	-.14**	-.14†
Env → Cent	-	-	.36***	.36***
Man_T → Peri1	.27***	.27***	.26***	.26**
Man_V → Peri1 (H2)	.12†	.12†	.12†	.12
Man_TV → Peri1	.19***	.19**	.18**	.18*
Man_T x Env → Peri1	-	-	-.05	-.05
Man_V x Env → Peri1	-	-	-.05	-.05
Man_TV x Env → Peri1	-	-	-.08	-.08
Env → Peri1	-	-	.17**	.17*
Man_T → Peri2	.09	.09	.07	.07
Man_V → Peri2 (H2)	.00	.00	.00	.00
Man_TV → Peri2	.12*	.12†	.09†	.09
Man_T x Env → Peri2	-	-	-.07	-.07
Man_V x Env → Peri2	-	-	-.09	-.09
Man_TV x Env → Peri2	-	-	.02	.02
Env → Peri2	-	-	.34***	.34***

Model	Model 1	Model 2	Model 3	Model 4
Paths	Main effect	Mediation without interaction	Interaction effect	Mediation with interaction
Man_T → Desire (H7)	.15*	.16*	.16*	.16
Man_V → Desire (H7)	.16*	.16*	.16*	.16
Man_TV → Desire (H7)	.09	.09	.09	.09
Man_T → Boredom (H7)	.01	.01	.01	.01
Man_V → Boredom (H7)	.03	.03	.03	.03
Man_TV → Boredom (H7)	-.06	-.06	-.06	-.06
Man_T → PI (H10)	.06	.06	.06	.06
Man_V → PI (H10)	-.04	-.04	-.05	-.05
Man_TV → PI (H10)	-.02	-.02	-.02	-.02
Man_T → Cent → Desire (H8)	-	.06* [.01, .07]	-	.05 [-.03, .13]
Man_V → Peri1 → Desire (H8)	-	.01 [-.02, .01]	-	.00 [-.31, .28]
Man_V → Peri2 → Desire (H8)	-	.00 [-.03, .03].	-	-.01 [-.06, .07]
Man_TV → Cent → Desire(H8)	-	.07* [.02, .09]	-	.07 [-.01, .15]
Man_T → Cent → Boredom (H8)	-	-.04† [-.06, .00]	-	-.04 [-.13, .05]
Man_V → Peri1 → Boredom (H8)	-	.01 [-.02, .03] (.00 [-.01, .02])	-	.00 [-.33, .35] (.00 [-.33, .35])
Man_V → Peri2 → Boredom (H8)	-	.00 [-.02, .01] (.01 [-.02, .02])	-	.01 [-.06, .06] (.01 [-.10, .11])
Man_TV → Cent → Boredom (H8)	-	-.05* [-.07, -.01] (-.06* [-.10, -.01])	-	-.05 [-.14, .03] (-.05 [-.12, .02])
R square				
PI	.51***	.51*** (.51***)	.52***	.52*** (.51***)
Desire	.41***	.41*** (.38***)	.43***	.42* (.39**)
Boredom	.13***	.13* (.13*)	.15***	.14 (.14)
Cent	.10***	.11** (.11**)	.27***	.27*** (.27***)
Peri1	.11**	.11** (.11**)	.15***	.15* (.15**)
Peri2	.02	.02 (.02)	.15***	.15** (.15**)
Model fit				
χ^2	451.13	451.14 (463.53)	823.31	823.31 (835.89)
df	273	273 (279)	357	357 (363)
p	.00	.00 (.00)	.00	.00 (.00)
χ^2 / *df*	1.65	1.65 (1.66)	2.31	2.31 (2.30)
RMSEA	.04	.04 (.04)	.06	.06 (.06)
CFI	.97	.97 (.97)	.92	.92 (.92)
TLI	.96	.96 (.96)	.90	.90 (.90)
SRMR	.04	.04 (.05)	.07	.07 (.07)

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Model 1 (see Table 13) was run without including Env and its interaction terms with the manipulation check scores for textual (Man_T), visual (Man_V), and textual with visual (Man_TV) modalities. The rationale behind doing this came from H1 and H4 where it was hypothesized that irrespective of the level of Env, textual and textual with visual modalities will increase the central processing of UCA. Furthermore, even though H2 hypothesized that a high Env will increase central processing of visual modality, it was not hypothesized that a low Env will decrease central processing of visual modality. Also, even though H3 hypothesized that a low Env will increase peripheral processing of visual modality, it was not hypothesized that a high Env will decrease peripheral processing of visual modality. Therefore, no interaction effect was hypothesized between Env and the three modalities. Thus, Model 1 was run to determine how the textual, visual, and textual with visual information in the UCA are processed, irrespective of the degrees of Env, and how they influence the affective responses to UCAs and PI.

Model 1 fits the data well ($\chi^2 = 451.13$, $df = 273$, $p < .001$; $\chi^2/df = 1.65$; RMSEA = .04; CFI = .97, TLI = .96; SRMR = .04). Model 1 indicated Man_T ($\beta = .15$, $p < .05$) and Man_TV ($\beta = .20$, $p < .001$) positively influenced Cent. This resonates with earlier findings from MANCOVA that UCAs in both textual (H1) and textual with visual (H4) modalities increase central processing. Man_V positively influenced Cent ($\beta = .23$, $p < .001$). It corroborates H2, indicating UCA in visual modality could be processed centrally. Man_V positively influenced Peri1 ($\beta = .27$, $p < .001$). This corroborates H3, indicating UCA in visual modality could be processed peripherally as well. However, Man_V did not significantly influence Peri2 ($\beta = .00$, $p > .01$). Overall, this resonates with earlier findings from MANCOVA that peripheral processing based on attractiveness is more important for UCA in visual modality than effortless processing.

Cent positively influenced the desire for sustainable apparel (Des, β = .37***, $p < .001$), thereby supporting H5 that central processing of UCAs will positively influence favorable affective responses toward sustainable apparel. Cent also negatively influenced boredom toward sustainable apparel (β = -.27, $p < .001$) thereby further corroborating support for H5, indicating central processing not only evokes a favorable affective response toward sustainable apparel in the form of desire, but also lowers unfavorable affective response toward sustainable apparel in the form of boredom.

Peri2 positively influenced Desire (β = .38, $p < .001$), but Peri1 did not (β = -.10, $p > .05$), thereby partially supporting H6. Peri2 negatively influenced Boredom (β = -.17, $p < .05$), but Peri1 did not (β = .06, $p > .05$). This indicates processing of UCAs on the basis of attractiveness is not effective to evoke either a desire or boredom toward sustainable apparel. At least some degree of effortless processing is required to evoke either a positive (Desire) or negative (Boredom) affective response toward sustainable apparel. Therefore, it could be implied that mere exposure to an attractive UCA may not evoke an affective response toward sustainable apparel. The strength of the message in satisfying consumers' concerns should be enhanced; it can both evoke a favorable affective response and minimize a negative affective response toward sustainable apparel by engaging consumers in an initial effortless processing and a final central processing of sustainable apparel.

Man_T (β = .15, $p < .05$) and Man_V (β = .16, $p < .05$) positively influenced Des, but Man_TV did not (β = .09, $p > .05$), thereby partially supporting H7. This indicates the higher the amount of textual information or visuals in the UCA, the higher the potential to evoke a favorable affective response toward sustainable apparel in the form of Des. However, when both textual and visual information are present, Desire was not evoked. Man_T (β = .01, $p > .05$), Man_V (β = .03, p

> .05), and Man_TV (β = -.06, p > .05) did not significantly influence Boredom. This indicates the amount of visual or textual information in the UCAs may not be effective in significantly lowering the unfavorable affective response toward sustainable apparel directly.

Desire positively influenced PI (β = .40, p < .001), thereby supporting H9 that favorable affective response toward sustainable apparel can positively influence PI for sustainable apparel. Boredom negatively influenced PI (β = -.46, p < .001), indicating an unfavorable affective response toward sustainable apparel negatively influences PI for sustainable apparel. This further supports H9.

Man_T (β = .06, p > .05), Man_V (β = -.04, p > .05), and Man_TV (β = -.02, p > .05) did not significantly influence PI, thereby rejecting H10. This indicates the amount of visual or textual information in the UCAs may not be effective in significantly influencing PI for sustainable apparel directly. Therefore, this implies it is not the modality itself, but the processing of the UCAs in different modalities that evokes affective response and PI for sustainable apparel.

Model 2 was run to test H8, i.e., to test if specific processing of UCA mediates the relationship between modalities and affective response toward sustainable apparel. Model 2 was run by including the indirect paths from the three modalities to affective responses, through their respective hypothesized processing routes. Model 2 fitted the data well (χ^2 = 451.13, df = 273, p < .001; χ^2/df = 1.65; RMSEA = .04; CFI = .97, TLI = .96; SRMR = .04). Cent mediated the relationship between Man_T and Desire (β = .06, p < .05, C.I = [.01, .07]). Cent mediated the relationship between Man_TV and Desire (β = .08, p < .05, C.I = [.02, .09]). Peri1 did not mediate the relationship between Man_V and Desire (β = .08, p < .05, C.I = [.02, .09]). Peri1 did not mediate the relationship between Man_V and Boredom (β = .08, p < .05, C.I = [.02, .09]). Peri2 did not mediate the relationship between Man_V and Desire (β = .08, p < .05, C.I = [.02, .09]). Peri2

did not mediate the relationship between Man_V and Boredom (β = .08, $p < .05$, C.I = [.02, .09]). Therefore, H8 was partially supported.

Additional analyses. Model 3 (see Table 13) was run by including Env and its interaction terms with the manipulation check item scores for textual, visual, and textual with visual modalities. This model was run to determine how Env and its interaction terms with the modalities influence the hypothesized relationships by comparing it with Model 1. Model 3 fits the data well (χ^2 = 823.31, df = 357, $p < .001$; χ^2/df = 2.31; RMSEA = .06; CFI = .92, TLI = .90; SRMR = .07). A $\mathbf{\Delta}\chi^2$ test was performed between Model 1 and Model 3 to test the null hypothesis that the two models are not significantly different from each other. The $\mathbf{\Delta}\chi^2$ test was significant ($\mathbf{\Delta}\chi^2$ = 372.18, $\mathbf{\Delta}$ df = 84), with a critical value of 106.40 at .05 significance level, thereby indicating that Model 3 was significantly different from Model 1. Given the fit indices for Model 3 were worse than the fit indices for Model 1, this indicates Model 1 was significantly better than Model 3. The common path coefficients between Models 1 and 3 were not significantly different from each other. However, Env had a significant positive influence on Cent (β = .36, $p < .001$), Peri1 (β = .17, $p < .001$), and Peri2 (β = .34, $p < .001$). This resonates with our MANCOVA results, which showed a significant main effect of Env on Cent, Peri1, and Peri2. Also, the interaction terms, Env x Man_T (β = -.06, $p > .05$) and Env x Man_V (β = -.04, $p > .05$) did not significantly influence Cent, but Env x Man_TV did (β = -.14, $p < .01$). This resonates with the MANCOVA results that modality and Env had a significant interaction effect on Cent. The negative significant path coefficient of Env x Man_TV on Cent indicates the higher the influence of Env on Cent, the lower the influence of Man_TV on Cent. In other words, in the presence of a high Env, message conveyed through textual with visual modality reduces its influence on the central processing of UCA. These findings, along with the plot from Figure 6, indicate although textual with visual modality increases Cent, a high Env can

attenuate the effect of the modality on Cent; Env will be the dominant factor to positively influence Cent, rather than the UCA's modality being textual with visual.

The interaction terms, Env x Man_T (β = -.05, $p > .05$) and Env x Man_V (β = -.05, $p > .05$), and Env x Man_TV did (β = -.08, $p > .05$) did not significantly influence Peri1. The interaction terms, Env x Man_T (β = -.07, $p > .05$) and Env x Man_V (β = -.08, $p > .05$), and Env x Man_TV did (β = .02, $p > .05$) did not significantly influence Peri2. This resonates with the MANCOVA results that modality and Env do not have a significant interaction effect on Peri1 and Peri2.

Model 4 (see Table 13) was run by including Env, its interaction terms with the manipulation check item scores for textual, visual, and textual with visual modalities, and the indirect paths from the modalities to affective responses, through central and peripheral processing. This model was run to compare it with Model 2, after including Env and its interaction terms in the model. Model 4 ($\chi^2 = 823.31$, $df = 357$, $p < .001$; $\chi^2/df = 2.31$; RMSEA = .06; CFI = .92, TLI = .90; SRMR = .07) fit the data well. A $\mathbf{\Delta}\chi^2$ test was performed between Model 2 and Model 4 to test the null hypothesis that the two models are not significantly different from each other. The $\mathbf{\Delta}\chi^2$ test was significant ($\mathbf{\Delta}\chi^2 = 372.36$, $\mathbf{\Delta}\ df = 84$), with a critical value of 106.40 at .05 significance level, thereby indicating that Model 2 was significantly different from Model 4. Given that the fit indices for Model 4 were worse than the fit indices for Model 2, Model 2 was significantly better than Model 4.

Variance explained in the dependent variables. Around 51% ($p < .001$), 41.3 % ($p < .001$), 13.1 % ($p < .001$), 10.4 % ($p < .001$), 10.9 % ($p < .01$), and 2.2 % ($p > .05$) of variance were explained in PI, Desire, Boredom, Cent, Peri1, and Peri2, respectively, in Model 1 and Model 2, while 51.6% ($p < .001$), 42.9 % ($p < .001$), 14.5 % ($p < .001$), 27.0 % ($p < .001$), 15.4 % ($p < .001$),

and 14.5 % ($p < .001$) of variance were explained in PI, Desire, Boredom, Cent, Peri1, and Peri2, respectively, in Model 3 and Model 4. Given that Env was included in Model 3 and Model 4, with a significant influence on Cent, Peri1, and Peri2, along with a significant interaction of Env x Man_TV on Cent, it could be implied the incremental variance explained in Cent, Peri1, and Peri2 in Model 3 and Model 4 was due to Env. However, given the variance explained in Cent and Peri1 were significant in Model 1 and Model 2 as well, it could be implied that modalities alone can explain variance in Cent and Peri1 significantly.

Study 2

Demographics. A total of 599 responses were collected from MTurk; 207 responses were deleted due to straight liner responses and participants younger than 24 or older than 39 years. Therefore, 392 was the useable sample size. A majority of the participants were in the age groups 24-29 (f = 165; 41.5%) and 30-35 years (f = 165; 42.1%), were male (f = 208; 53.1%), had a 4-year college degree (f = 196; 50%), annual household income between 31,000 to 60,000 USD (f = 130; 33.2%), and were married (f = 208; 53.1%), employed for wages (f = 285; 72.7%), and Caucasian (f = 249; 63.1%). Other details about the participants' demographic characteristics are provided in Table 10. According to Pew Research Center (2020), in 2018 around 8, 25, 28, and 39% of millennials in the U.S. had an education qualification of less than high school graduation, high school graduation, some college degree, and bachelor's degree or higher, respectively. Therefore, the sample for this study was slightly more educated than the U.S. national population (see Table 10). Around 72% female and 83% male millennials of the U.S. were employed in 2018 (Pew Research Center, 2020). This closely resonates with the employment status of the sample for this study (see Table 10). Median annual earnings among full-time working millennials in the U.S. in 2018 was in the range 31,300 to 56, 000 USD (Pew Research Center, 2020). This closely resembled

the sample for this study (see Table 10). While 46% of millennials in the U.S. in 2018 were married, the percentage of married individuals in this study was slightly higher than the national population of millennials in the U.S. (see Table 10). Overall, although the demographic characteristics of the sample for this study was not exactly like the national population of the millennials in the U.S., it closely resembled the national population.

Manipulation check. ANOVA and post-hoc test with Bonferroni correction indicated all three concerns (i.e., affordability vs. social desirability vs. environment protection) were significantly different from each other. The stimulus with the concern for affordability was rated significantly higher in the statement, "More than anything else, this advertisement focuses on the need for buying apparel affordably" than the stimuli with the concerns for social desirability and protecting the environment ($F = 25.45$; $p < .001$). The stimulus with the concern for social desirability was rated significantly higher in the statement, "More than anything else, this advertisement focuses on the need for sharing one's ethical buying with others" than the stimuli with the concerns for affordability and protecting the environment ($F = 17.33$; $p < .001$). The stimulus with the concern for protecting the environment was rated significantly higher in the statement, "More than anything else, this advertisement focuses on the need for protecting the environment" than the stimuli with the concerns for social desirability and protecting the environment ($F = 39.48$; $p < .001$). Therefore, the manipulation checks for these three concerns were successful (see Table 14).

Table 14

Manipulation Check Results for three Concerns in Stimuli for Study 2

DV	Stimuli	Descriptives			ANOVA		Multiple Comparison	
		n	*M*	*SD*	*F*	*p*	Mean difference	*p*
More than anything else, this advertisement focusses on the need for buying apparel affordably.	Affordability	133	5.31	1.34	25.45	.00	**1.06 (M_A-M_{SD})**	.00
							1.53 (M_A-M_E)	.00
	Social Desirability	129	4.25	1.96			-1.06(M_{SD}-M_A)	.00
							.47 (M_{SD}-M_E)	.10
	Environment	130	3.78	1.99			-1.53 (M_E-M_A)	.00
							-.47 (M_E-M_{SD})	.10
More than anything else, this advertisement focusses on the need for sharing about one's ethical buying to others.	Affordability	133	4.42	1.68	17.33	.00	-1.09 (M_A-M_{SD})	.00
							-.26 (M_A-M_E)	.56
	Social Desirability	129	5.51	1.38			**1.09 (M_{SD}-M_A)**	.00
							.84 (M_{SD}-M_E)	.00
	Environment	130	4.68	1.61			.26 (M_E-M_A)	.56
							-.84 (M_E-M_{SD})	.00
More than anything else, this advertisement focusses on the need for protecting environment.	Affordability	133	5.46	1.26	39.48	.00	.60 (M_A-M_{SD})	.00
							-.79 (M_A-M_E)	.00
	Social Desirability	129	4.86	1.56			-.60 (M_{SD}-M_A)	.00
							-1.38 (M_{SD}-M_E)	.00
	Environment	130	6.25	.86			**.79 (M_E-M_A)**	.00
							1.39 (M_E-M_{SD})	.00

An independent sample student's *t*-test indicated the two modalities (textual vs. textual with visual) were significantly different from each other. The stimulus in textual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through textual information" than textual with visual modality ($t = 12.48$; $p < .001$). The stimulus in textual with visual modality was rated significantly higher in the statement, "I think the advertisement message is primarily conveyed through both visual and textual information" than textual modality ($F = 20.79$; $p < .001$). Therefore, the manipulation checks for the two modalities were successful (see Table 15).

Table 15

Manipulation Check Results for Modalities in Stimuli for Study 2

DV	Stimuli	Descriptives			*t*-test		
		n	*M*	*SD*	*t*	*p*	Mean difference ($M_{Text} - M_{TextVis}$)
I think that the advertisement message is primarily conveyed through visuals.	Textual	202	3.97	2.03	24.40	.00	-.97
	Visual and Textual	190	4.93	1.67			
I think that the advertisement message is primarily conveyed through textual information.	Textual	202	5.77	1.32	**12.48**	**.00**	1.62
	Visual and Textual	190	4.61	1.59			
I think that the advertisement message is primarily conveyed through both visual and textual information.	Textual	202	4.69	1.83	**20.79**	**.00**	-.70
	Visual and Textual	190	5.38	1.38			

Central tendency, reliability and validity of scales. Following the accepted cut off for skewness and kurtosis, -2, +2, respectively (Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006), all measurement scales showed an acceptable central tendency. Therefore, normality was assumed for all these scales. All measurement scales showed adequate reliability and validity (see Tables 16 and 17). EFA was performed using SPSS with principal components analysis and the varimax method. The number of factors were identified from the scree plots. The initial EFA indicated unidimensional factor structure for purchase intention for sustainable apparel (PI), instrumental emotion (InsEmo), social emotion (SocEmo), aesthetic emotion (AesEmo), legitimacy (Leg), pleasantness (Pleasant), fashion innovativeness (Fash), and need for cognition (NFC). The bi-dimensional factor structure for affordability (perceived benefits of and barriers toward affordable sustainable apparel consumption) was expected.

CFA conducted with Mplus (version 8.4) indicated the measurement model fitted the data well (χ^2 = 1462.23, *df* = 815, $p < .001$; χ^2 / *df* = 1.79; RMSEA = .05; CFI =.95, TLI = .94, SRMR = .04). Factor loadings of all the items for all scales were greater than .70, except for the item "I would prefer a task that is intellectual, difficult, and important to one that is somewhat important, but does not require much thought" measuring NFC (factor loading = .64) (see Table 16). However, given a factor loading greater than .60 is considered acceptable, the item was retained (Fornell & Larcker, 1981; Hooper, 2012). Cronbach's alpha was greater than .70 for all scales, except for perceived barriers toward affordable sustainable apparel consumption (AffBar, Cronbach's alpha = .68) (see Table 16). However, given Cronbach's alpha greater than .60 is considered reliable for scales with three or less items (Aron & Aron, 1999; Hair et al., 2006; Nunnally, 1967; Wanous et al., 1997), AffBar was considered reliable to measure perceived barriers toward affordable sustainable apparel consumption. Composite reliability for all scales was greater than .74, except for AffBar and NFC. However, given both these scales had two items and a composite reliability greater than .60, considered reliable for scales having three or less items, these two scales were considered reliable to measure perceived barriers toward affordable sustainable apparel consumption and need for cognition, too (Aron & Aron, 1999; Hair et al., 2006; Nunnally, 1967; Wanous et al., 1997). Therefore, all scales had sufficient reliability (see Table 16). AVE was greater than .50 for all scales, indicating adequate convergent validity (see Table 16), except for AffBar (AVE = .42). However, when a scale has three or less items, an AVE of .40 or greater indicates adequate convergent validity when the composite reliability is greater than .60 (Fornell & Larcker, 1981; Lam, 2012). Given the AVE for AffBar was greater than .40 with both composite reliability and Cronbach's alpha greater than .60, it was considered to have adequate convergent validity. The

square roots of the AVEs were greater than the inter-construct correlations for each variable, thereby indicating adequate discriminant validity (see Table 17).

Table 16

Measurement Scale Items with their Factor Loadings from Confirmatory Factor Analysis (CFA), Average Variance Extracted (AVE), and Reliabilities for Study 2

Items	CFA Factor loadings	AVE	Composite reliability	Cronbach's alpha
Purchase intention (PI)		.63	.87	.87
1. How likely is that you would consider purchasing a sustainable apparel in the longer term?	.74			
2. How likely is that you would visit a store for sustainable apparel?	.77			
3. How likely is that you would definitely buy sustainable apparel in the future?	.84			
4. How likely is that you would probably buy sustainable apparel in the future?	.83			
Instrumental emotion (InsEmo)		.59	.74	.73
1.  Satisfied.	.82			
2.  Contented.	.71			
Social emotion (SocEmo)		.59	.74	.74
1.  Admiration.	.75			
2.  Impressed.	.79	.59		

Items	CFA Factor loadings	AVE	Composite reliability	Cronbach's alpha
Aesthetic emotion (AesEmo)			.75	.74
1.  Desire.	.76			
2.  Yearning.	.79			
Legitimacy (Leg)		.62	.92	.92
1. I have confidence in protecting environment through sustainable apparel consumption.	.79			
2. I have confidence in protecting environment by wearing environmentally friendly apparel.	.81			
3. I have confidence in protecting environment by using environmentally friendly apparel.	.82			
4. I have confidence in protecting environment by buying environmentally friendly apparel.	.85			
5. I have much respect for people who wear environmentally friendly apparel.	.74			
6. I have much respect for people who buy environmentally friendly apparel.	.72			
7. Environmentally friendly apparel does its job well in protecting environment.	.78			
Pleasantness (Pleasant)		.73	.95	.96
1. How pleasant do you find the idea of inspiring people for protecting the planet by buying environmentally friendly and ethically made apparel?	.77			
2. How pleasant do you find the idea of sharing your stories of sustainable apparel consumption to inspire others for sustainable apparel consumption?	.87			
3. How pleasant do you find the idea of sharing your stories of using sustainable	.90			

Items	CFA Factor loadings	AVE	Composite reliability	Cronbach's alpha
apparel to inspire others for using sustainable apparel?				
4. How pleasant do you find the idea of sharing your stories of wearing sustainable apparel to inspire others for wearing sustainable apparel?	.85			
5. How pleasant do you find the idea of sharing your stories of buying sustainable apparel to inspire others for buying sustainable apparel?	.87			
6. How pleasant do you find the idea of sharing your stories of using environmentally friendly and ethically made apparel to inspire others for using environmentally friendly and ethically made apparel?	.85			
7. How pleasant do you find the idea of sharing your stories of wearing environmentally friendly and ethically made apparel to inspire others for wearing environmentally friendly and ethically made apparel?	.83			
8. How pleasant do you find the idea of sharing your stories of buying environmentally friendly and ethically made apparel to inspire others for buying environmentally friendly and ethically made apparel?	.87			
Perceived benefit of affordable SAC (AffBe)		.55	.78	.78
1. If I had to buy sustainable apparel, I would feel better if I could comply to my motive of buying affordably.	.74			
2. If I had to buy sustainable apparel, I would feel better if I could buy affordable sustainable apparel.	.78			
3. If I had to buy sustainable apparel, I would consider buying sustainable apparel that are pocket friendly.	.70			
Perceived barrier toward affordable SAC (AffBar)				
1. Complying to my motive of buying affordably might be hard if I have to buy sustainable apparel.	.63	.42	.69	.68

Items	CFA Factor loadings	AVE	Composite reliability	Cronbach's alpha
2. Shopping for sustainable apparel could be very expensive.	.68			
3. It will be difficult to comply to my motive of following a budget if I have to buy sustainable apparel.	.64			
Fashion innovativeness (Fash)		.54	.96	.95
1. Compared to my friends, I own very new fashion clothes.	.86			
2. I know the names of new fashion designers before other people do.	.84			
3. If I heard that new fashion clothes were available in store, I would be interested enough to buy it.	.83			
4. I will buy new fashion clothes even if I have not seen it before.	.78			
5. Fashionable, attractive clothing is very important to me.	.81			
6. Keeping up with the latest fashion is important to me.	.90			
7. I spend considerable time and effort to learn about the latest fashion.	.90			
8. I keep wardrobe up to date with the changing fashions.	.88			
9. I usually have one or more outfits of the very new fashion.	.89			
10. I consciously choose something that reflects the current fashion.	.85			
Need for cognition (NFC)		.53	.69	.72
1. I would prefer complex to simple problems.	.81			
2. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	.64			

Table 17

Mean, Standard Deviation, and Correlations of the Research Variables in Study 2

Variables	M	SD	1	2	3	4	5	6	7	8	9	10
1. PI	5.41	1.15	**.79**									
2. InsEmo	4.34	1.16	.48**	**.77**								
3. SocEmo	4.28	1.23	.49**	.63**	**.77**							

4. AesEmo	3.86	1.24	.56**	.54**	.63**	**.77**						
5. Leg	5.22	1.09	.73**	.53**	.57**	.49**	**.79**					
6. Pleasant	5.03	1.26	.60**	.47**	.50**	.48**	.73**	**.85**				
7. AffBen	5.75	.97	.35**	.24**	.28**	.14**	.34**	.23**	**.74**			
8. AffBar	5.14	1.15	.03	-.06**	.03	-.02**	-.04	-.02	.40**	**.65**		
9. Fash	4.16	1.60	.35**	.35**	.33**	.14**	.38**	.48**	-.06	.02	**.85**	
10. NFC	4.90	1.35	.33**	.24**	.19**	.31**	.27**	.24**	.13*	.09	.28**	**.77**

Note. The bold numbers in the diagonal represent the square root of the AVE of each of the research variables. All the square roots of AVE were much higher than the correlations in the respective columns, indicating that the research variables had adequate discriminant validity. **$p < .01$.

Hypotheses testing. Given PI was measured on a 7-point Likert-type scale (1 = Strongly Disagree; 7 = Strongly Agree), 4 was the neutral point. Therefore, a mean score significantly above 4 indicates an increased PI. One sample student's *t*-test indicated mean scores for PI ($t = 24.21$, $df = 391$, $p < .001$; $M = 5.41$, $SD = 1.15$, $MD = 1.41$) were significantly higher than 4. Therefore, there was a significant increase in the mean score for PI from the neutral point 4, indicating an increase in purchase intention for sustainable apparel. However, a one-way ANOVA conducted with PI and concerns as the dependent and independent variables, respectively, indicated no significant difference in the means for PI between the three concerns ($F = .71$, $p = .49$). In other words, all three concerns (i.e., affordability vs. social desirability vs. environment protection) were affecting the PI in very similar ways and no one concern increased the PI for sustainable apparel significantly higher than the other concerns. Additionally, a univariate analysis of variance was performed with PI as the dependent variable, concern and modality (textual vs. textual with visual) as the fixed factors, and Fash and NFC as the covariates. Both Fash ($F = 32.91$, $p < .001$) and NFC ($F = 26.20$, $p < .001$) covaried with PI significantly. As such, even when the influence of Fash and NFC on PI was controlled, there was no significant difference in the means for PI between the three concerns ($F = .24$, $p = .79$) and the two modalities ($F = .04$, $p = .85$). No significant interaction was observed between concern and modality for PI ($F = .99$, $p = .37$). Figure 10 shows the results of a univariate

analysis of variance that indicates when the UCA had concerns for environment protection (*EMM* = 5.45, *M* = 5.50, *SD* = 1.16), affordability (*EMM* = 5.41, *M* = 5.35, *SD* = 1.18), and social desirability (*EMM* = 5.36, *M* = 5.37, *SD* = 1.12), the EMMs for PI were very close to each other. Although, it seems visually that the *EMM* for PI for the concern for environment protection is higher than the concern for affordability, followed by social desirability (see Figure 10), the differences between the *EMM*s for PI for these three concerns were statistically insignificant. Therefore, all three concerns have the potential to increase PI for sustainable apparel. No one concern was more effective to increase the PI than the other two concerns, thereby rejecting H11.

Moreover, when textual modality was considered, the *EMM*s for PI for the concerns for environment protection (*EMM* = 5.49, *M* = 5.66, *SD* = 1.11) and affordability (*EMM* = 5.45, *M* = 5.43, *SD* = 1.15) were slightly higher than the concern for social desirability (*EMM* = 5.24, *M* = 5.23, *SD* = 1.08). The difference was insignificant (see Figure 12). Similarly, although the textual with visual modality was considered, the *EMM* for PI for the concern for social desirability (*EMM* = 5.48, *M* = 5.52, *SD* = 1.15) was slightly higher than the concerns for protecting the environment (*EMM* = 5.41, *M* = 5.33, *SD* = 1.19) and affordability (*EMM* = 5.36, *M* = 5.26, *SD* = 1.21), the difference was not significant (see Figure 12). Overall, these results indicated all three concerns could evoke a positive PI for sustainable apparel and none of the three concerns was significantly more effective in evoking a positive PI for sustainable apparel than the other. This holds true irrespective of whether consumers have high or low fashion innovativeness and a need for cognition. Therefore, H11 was rejected.

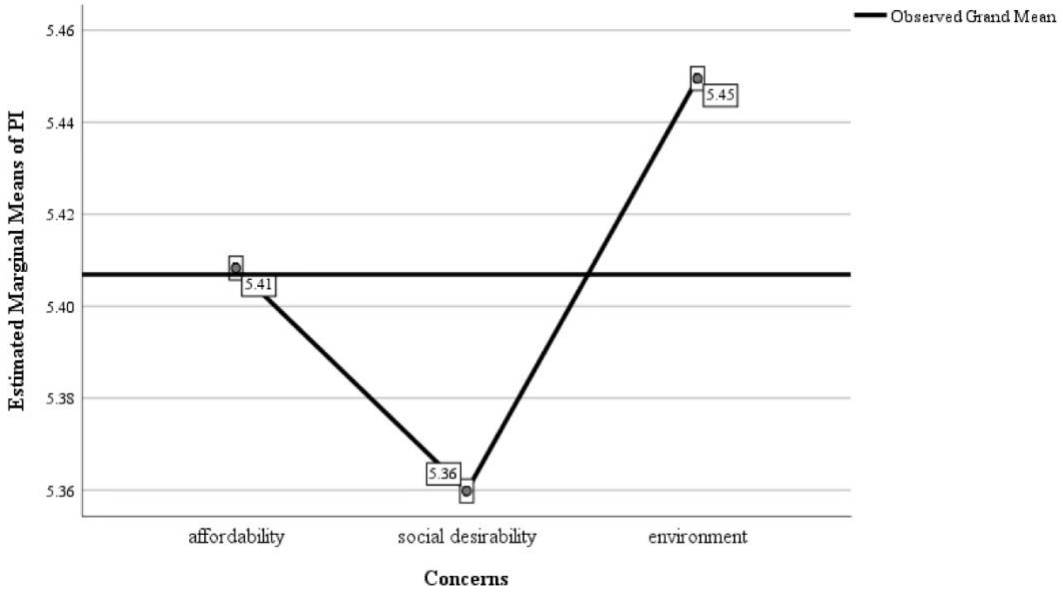

Figure 10. Plot indicating the estimated marginal means of purchase intention (PI) between the three concerns.

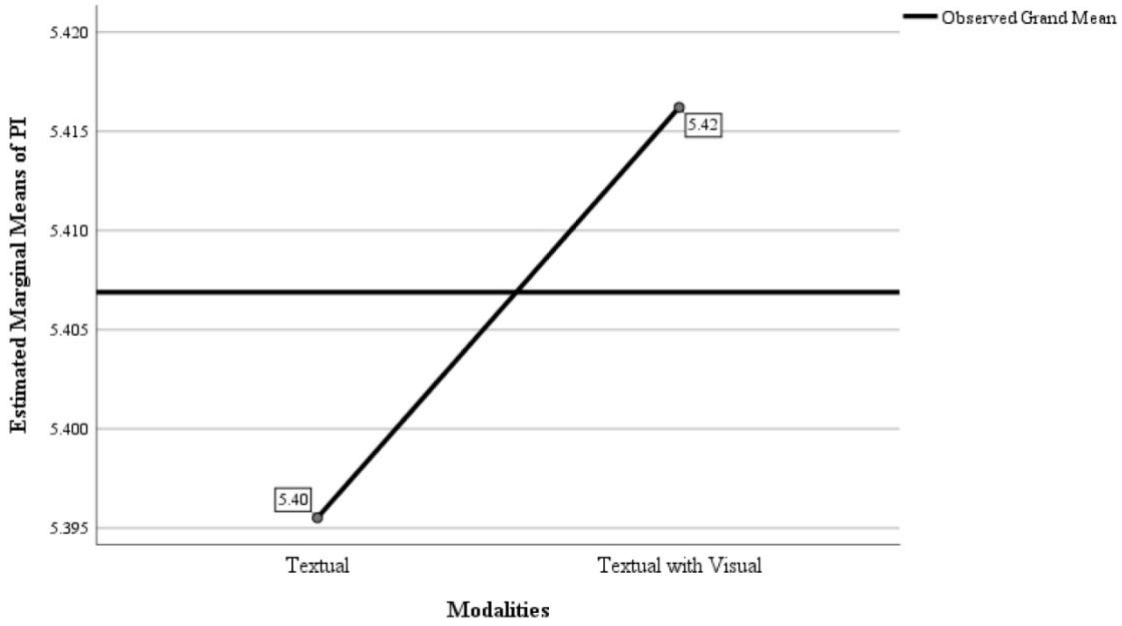

Figure 11. Plot indicating the estimated marginal means of purchase intention (PI) between the two modalities.

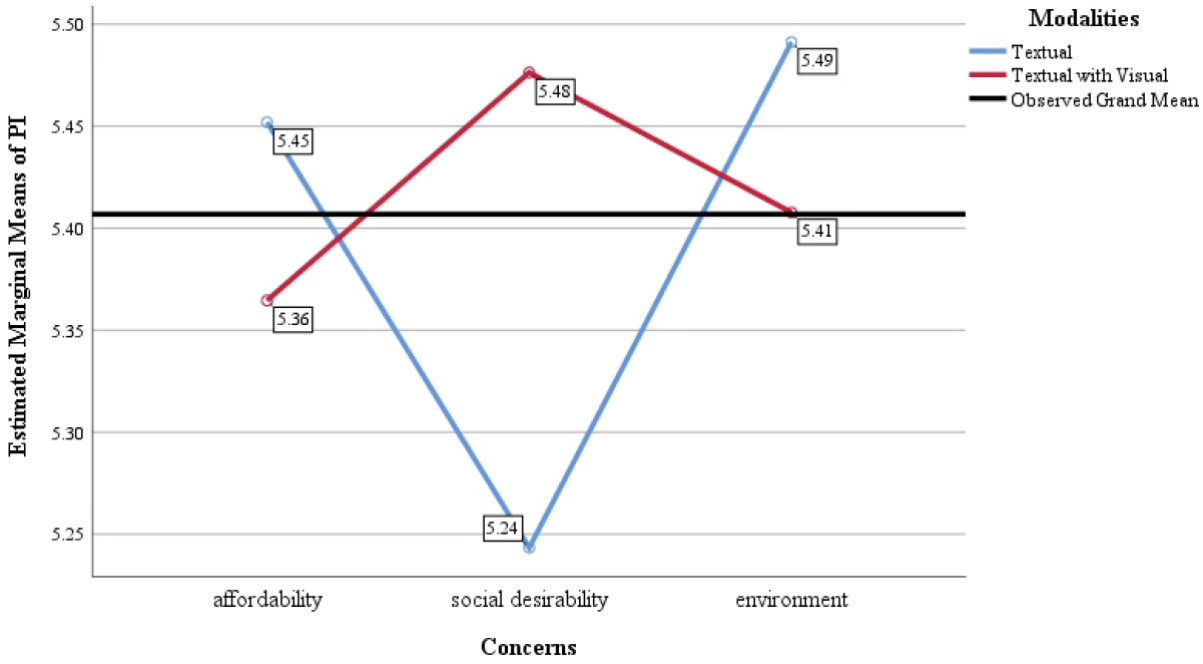

Figure 12. Interaction plot indicating the estimated marginal means of purchase intention (PI) between the three concerns, as a function of two modalities.

SEM was performed in MPlus (version 8.4) to test H12-H19 and the overall feasibility of the conceptual model (see Table 18). Scores for the manipulation check items for the three concerns were used as proxy measurements to represent the three concerns. The score for these items, "More than anything else, this advertisement focuses on the need to buy apparel affordably" represented the concern for affordability (ManAff), "More than anything else, this advertisement focuses on the need for sharing one's ethical buying to others" represented the concern for social desirability (ManSD), and "More than anything else, this advertisement focuses on the need for protecting the environment" represented the concern for environment protection (ManEnv). The rationale behind this came from the successful manipulation of the three concerns, thereby indicating the concern for affordability was significantly higher in the stimulus for affordability than the stimuli for social desirability or environment protection; the concern for social desirability was significantly higher in the stimulus for social desirability than the stimuli for affordability or environment protection; and

the concern for environment protection was significantly higher in the stimulus for environment protection than the stimuli for affordability or social desirability.

Composite scores for InsEmo, AesEmo, and SocEmo were used in SEM instead of treating them as latent variables. The rationale came from the high significant correlations among these three factors measuring emotional response toward sustainable apparel; covarying the three factors in the model led to an unidentified model, due to non-convergence. No issues with convergence and model identification were observed after using the composite scores for these three factors.

Table 18

Path Coefficients and Significant Test Results for Study 2

Model	Model 1	Model 2	Model 3
Paths	Direct effects	Mediation (Concern→ Appraisal→ Emotional response)	Indirect effect (Appraisal→ Emotional response→ PI)
InsEmo→ PI (H18)	.22***	.22***	.22***
SocEmo → PI (H18)	.14*	.14*	.14*
AesEmo → PI (H18)	.33***	.33***	.33***
ManAff → PI (H11)	.03	.03	.03
ManSD → PI (H11)	.06	.06	.06
ManEnv → PI (H11)	.15***	.15***	.15***
ManAff → AffBen (H12-14)	.01	.01	.01
ManSD → AffBen (H12-14)	.01	.01	.01
ManEnv→ AffBen (H12-14)	.21***	.21***	.21***
ManAff → AffBar (H12-14)	.16*	.16*	.16*
ManSD → AffBar (H12-14)	.12†	.12†	.12†
ManEnv→ AffBar (H12-14)	-.07	-.07	-.07
ManAff → Pleasant (H12-14)	.10*	.10*	.10*
ManSD → Pleasant (H12-14)	.17***	.17***	.17***
ManEnv→ Pleasant (H12-14)	.27***	.27***	.27***
ManAff → Leg (H12-14)	.15***	.15***	.16***
ManSD → Leg (H12-14)	.11*	.11*	.11*
ManEnv→ Leg (H12-14)	.37***	.37***	.37***
AffBen → InsEmo (H15)	.90***	.90***	.90***
AffBar → InsEmo (H15)	-.89***	-.89***	-.89***
Legitimacy → SocEmo (H17)	.51***	.51***	.51***
Pleasant → AesEmo (H16)	.35***	.35***	.35***

Model	Model 1	Model 2	Model 3
Paths	Direct effects	Mediation (Concern→ Appraisal→ Emotional response)	Indirect effect (Appraisal→ Emotional response→ PI)
ManAff → InsEmo	.29***	.29***	.29***
ManSD → InsEmo	.25***	.25***	.25***
ManEnv→ InsEmo	-.01	-.01	-.01
ManAff → SocEmo	-.04	-.04	-.04
ManSD → SocEmo	.03	.03	.03
ManEnv→ SocEmo	.08†	.08†	.08†
ManAff → AesEmo	.12**	.12**	.12**
ManSD → AesEmo	.12**	.12**	.12**
ManEnv→ AesEmo	.15***	.15***	.15***
ManAff → AffBen → InsEmo (H19a)	-	.01 [-.08, .09]	.01 [-.08, .09]
ManAff → AffBar → InsEmo (H19a)	-	-.14* [-.26, -.03]	-.14* [-.26, -.03]
ManSD → Pleasant → AesEmo (H19b)	-	.06** [.03, .09]	.06** [.03, .09]
ManEnv → Leg → SocEmo (H19c)	-	.19***[.14, .24]	.19***[.14, .24]
AffBen→ InsEmo → PI	-	-	.20*** [.08, .30]
AffBar→ InsEmo → PI	-	-	-.20*** [-.30, -.10]
Leg→ SocEmo → PI	-	-	.07* [.02, .12]
Pleasant→ AesEmo → PI	-	-	.12*** [.08, .16]
R square			
PI	.45***	.45***	.45***
Leg	.20***	.20***	.20***
Pleasant	.13***	.13***	.13***
InsEmo	.43***	.43***	.43***
SocEmo	.30***	.30***	.30***
AesEmo	.25***	.25***	.25***
AffBen	.04†	.04†	.04†
AffBar	.05	.05	.05
Model fit			
χ^2	831.1603	831.160 (861.292)	831.160
df	359	359 (362)	359
p	.00	.00	.00
χ^2 / df	2.32	2.32	2.32
RMSEA	.06	.06	.06
CFI	.94	.94	.94
TLI	.92	.92	.92
SRMR	.09	.09	.09

†$p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Three models were run successively to test the hypotheses and check for additional significant relationships (see Table 18). Adjustments were made in the models by covarying the residuals of the items with inter-item standardized residual covariations > 5. The models were run with the Maximum Likelihood method, 10,000 iterations, .00005 convergence, and 1,000 Bootstrap. Model 1 (see Table 18) was conducted to test H12 to H18, i.e., the hypothesized direct paths. Model 1 fit the data well (χ^2 = 831.16, *df* = 359, $p < .001$; χ^2/df = 2.32; RMSEA = .06; CFI = .94, TLI = .92; SRMR = .089). Even though the SRMR was slightly high, a value close to .80 and less than .10 is considered acceptable (Burnette, 2010; Hu & Bentler, 1998; Schermelleh-Engel et al., 2003; Vandenberg & Lance, 2000). Model 1 indicated ManAff resulted in a higher appraisal of motive compliance in the sustainable apparel in terms of perceived barriers (AffBar) toward consuming sustainable apparel affordably (β = .16, $p < .05$), as compared to intrinsic pleasantness (β = .10, $p < .05$) or legitimacy (β = .15, $p < .001$). Therefore, as the concern for consuming sustainable apparel affordably increased in the UCA in terms of perceived barriers toward affordable sustainable apparel consumption (e.g., difficulty in buying expensive sustainable apparel), appraisal of sustainable apparel in terms of motive compliance becomes higher than the appraisal as intrinsically pleasant or legitimate. However, ManAff did not have any significant influence on appraisal of motive compliance in terms of perceived benefits (AffBen) of affordable sustainable apparel consumption (β = .01, $p > .05$). Therefore, H12 was partially supported. This indicates consumers are likely to put more emphasis on how sustainable apparel consumption could be difficult to comply to their motive of buying affordably rather than how affordable sustainable consumption could help them comply with their motive of staying within a budget.

Furthermore, Model 1 indicated ManSD resulted in a higher appraisal of intrinsic pleasantness in sustainable apparel (β = .17, $p < .05$), compared to motive compliances in terms of

perceived benefits (AffBen, β = .01, $p > .05$) or perceived barriers toward affordable sustainable apparel consumption (AffBar, β = .12, $p < .10$), and legitimacy for protecting environment (Leg, β = .11, $p < .05$). Therefore, H13 was supported. This indicates as the concern for social desirability in terms of projecting oneself as ethical increased in the UCA, appraisal of sustainable as intrinsically pleasant becomes higher than the appraisal as motive compliant or legitimate.

ManEnv resulted in a higher appraisal of legitimacy in the sustainable apparel (β = .37, $p < .001$), compared to motive compliant in terms of perceived benefits of (β = .21, $p < .001$) or perceived barriers toward affordable sustainable apparel consumption (β = -.07, $p > .05$), and intrinsic pleasantness (β = .27, $p < .001$). Therefore, H14 was supported. This indicates as the concern for protecting the environment increased in the UCA, appraisal of sustainable as legitimate in protecting the environment becomes higher than the appraisal as motive compliant or intrinsically pleasant.

Appraisal of sustainable apparel as motive compliant in terms of AffBen positively influenced instrumental emotional response (β = .90, $p < .001$). Appraisal of sustainable apparel as motive compliant in terms of AffBar negatively influenced instrumental emotional response (β = -.89, $p < .001$). Therefore, H15 was supported. This indicates that as the appraisal of a sustainable apparel complies with the motive for buying affordably becomes higher, consumers experience positive instrumental emotions (e.g., satisfied and contended) toward sustainable apparel. Whereas, as the appraisal of sustainable apparel as difficult to comply with the motive of buying affordably becomes higher, consumers' positive instrumental emotions (e.g., satisfied and contended) toward sustainable apparel lowered.

Appraisal for sustainable apparel as intrinsically pleasant positively influenced an aesthetic emotional response (β = .35, $p < .001$). Therefore, H16 was supported. This indicates as the

appraisal for sustainable apparel in terms of being able to meet an individual's concern for social desirability (by projecting his/her ethical buying to others) increases, positive aesthetic emotions (e.g., desire, yearning) toward sustainable apparel increases.

Appraisal of sustainable apparel as legitimate positively influenced social emotional response (β = .51, $p < .001$). Therefore, H17 was supported. This indicates as the appraisal for sustainable apparel as legitimate in terms of protecting the environment increases, positive social emotions (e.g., admiration, impressed) toward sustainable apparel increases.

Instrumental (β = .22, $p < .001$), aesthetic (β = .33, $p < .001$), and social (β = .14, $p < .05$) emotional responses positively influenced PI for sustainable apparel, thereby supporting H18. This indicates irrespective of the specific emotional class, a positive emotional response can positively influence PI for sustainable apparel. A summary of Model 1 is given in Figure 13.

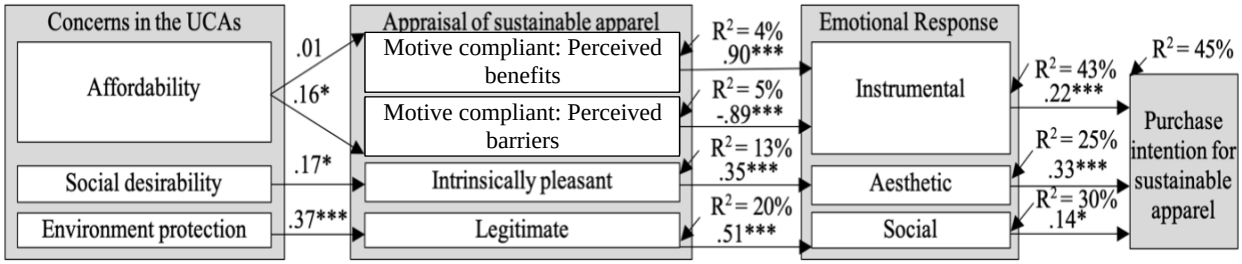

Figure 13. Standardized path coefficients from Model 1 of Study 2. *$p < .05$, **$p < .01$, ***$p < .001$.

Model 2 was run to test H19, i.e., to test if specific appraisals for sustainable apparel mediate the relationships between concerns in the UCA and their respective emotional responses. Model 2 was run by including the indirect paths from the three concerns to emotional responses, through their respective hypothesized appraisals. Model 2 fit the data well ($\chi^2 = 831.16$, $df = 359$, $p < .001$; $\chi^2/df = 2.32$; RMSEA = .06; CFI = .94, TLI = .92; SRMR = .09). AffBar mediated the relationship between ManAff and InsEmo (β = -.14, $p < .05$, C.I = [-.26, -.03]), but AffBen did not (β = .01, $p > .05$, C.I = [-.08, .09]). Therefore, H19a was partially supported. Pleasant mediated the

relationship between ManSD and AesEmo (β = .06, $p < .01$, C.I = [.03, .09]). Therefore, H19b was supported. Leg mediated the relationship between ManEnv and SocEmo (β = .19, $p < .001$, C.I = [.14, .24]). Therefore, H19c was supported. Therefore, H12 and H9a were partially supported, and H13-H18, H9b and H9c were supported.

Additional analysis. Model 3 was run to determine if there is any indirect influence of appraisal on PI through emotional responses. Model 3 was run by including indirect paths from the appraisal to PI, through the emotional responses. These paths were included in addition to the indirect paths from Model 2. Model 3 fit the data well ($\chi^2 = 831.16$, $df = 359$, $p < .001$; $\chi^2/df = 2.32$; RMSEA = .06; CFI = .94, TLI = .92; SRMR = .09). The model indicated Affben (β = .20, $p < .001$, C.I = [.08, .30]) and AffBar (β = -.20, $p < .001$, C.I = [-.30, -.10]) had significant indirect influences on PI through InsEmo. Leg (β = .07, $p < .05$, C.I = [.02, .12]) had a significant indirect influence on PI through SocEmo. Pleasant (β = .12, $p < .001$, C.I = [.08, .16]) had s significant indirect influence on PI through AesEmo.

Variance explained in the dependent variables. Around 45% ($p < .001$), 43.3% ($p < .001$), 29.6% ($p < .001$), 24.6% ($p < .001$), 19.7% ($p < .001$), 12.5 % ($p < .001$), 4.8 % ($p > .05$), and 4.4 % ($p = .056$) of variance were explained in PI, InsEmo, SocEmo, AesEmo, Leg, AffBar and AffBen, respectively, for Models 1-3.

Chapter 5: Discussion

This chapter discusses the links between the overall problem, purpose, objectives, hypotheses, and findings of Study 1 and Study 2, along with their links with extant literature. The overall purpose of Study 1 and Study 2 was to empirically test the efficacy of UCAs (i.e., User-Centric Advertisements) in positively influencing purchase intention for sustainable apparel. This addresses the practical marketing problem that sustainable apparel brands are not holistically communicating how sustainable apparel can meet consumers' concerns for affordability, social desirability, and environment protection, thereby failing to present sustainable apparel as relevant to their needs. Specifically, the two studies contended and provided empirical evidence that when consumers' concerns for affordability, social desirability, and protecting the environment are integrated within the advertisements of sustainable apparel, purchase intention for sustainable apparel is encouraged. As such, the purchase intention for sustainable apparel is encouraged either directly from the UCAs or by evoking positive emotional responses toward sustainable apparel, due to consumers favorably processing the UCAs. The following sections provide a detailed discussion for Study 1 and Study 2, linking the findings with extant literature.

Study 1

Drawing from the theoretical framework of ELM (Petty & Cacioppo, 1984), this study explained how UCAs for sustainable apparel are processed. ELM suggests that when an individual has high involvement with an issue, he/she will evaluate (elaborate on) an object extensively (centrally) to form an enduring attitude toward it (Petty & Cacioppo, 1984). When an individual has low involvement with an issue, he/she will evaluate an object superficially (peripherally) to form a temporary attitude toward it (Petty & Cacioppo, 1984). However, central and peripheral processing are not mutually exclusive (Cacioppo & Petty, 1984; Petty & Cacioppo, 1986). A temporary

attitude formed through peripheral processing could be modified through central processing by increasing individuals' motivations to process the object (Cacioppo & Petty, 1986). Based on these propositions, Study 1 contended that if an individual's involvement with sustainable apparel could be increased by communicating how sustainable apparel is effective in satisfying consumers' concerns, the individual could form an enduring favorable attitude toward sustainable apparel, by processing sustainable apparel centrally. More importantly, Study 1 contended sustainable apparel could be processed centrally, irrespective of consumers' involvements with environmental issues, when UCAs communicate how sustainable apparel could meet consumers' concerns. The need for such UCAs was identified in this study, due to numerous mentions in the extant literature that having a high environmental knowledge/awareness/concern is inadequate in translating to a purchase intention for sustainable products (Alles et al., 2017; Brough et al., 2016; de Barcellos et al., 2011; Peschel et al., 2016). Consumers often make their purchase intention decisions on the basis of their affordability of sustainable apparel and its ability to project a favorable image in their social setting (Harris et al., 2016; Joy et al., 2012; McNeill & Moore, 2015). However, despite the discernable importance of communicating how sustainable apparel can satisfy consumers' concerns for affordability or social desirability, alongside protecting the environment, the leading sustainable apparel brands (e.g., Patagonia, Reformation, Everlane) fail to integrate these concerns effectively in their advertisements, losing the opportunity to evoke a positive purchase intention for sustainable apparel.

Therefore, the overall purpose of Study 1 was to test the efficacy of a UCA to encourage purchase intention for sustainable apparel, by integrating the three most important concerns for sustainable apparel consumption (i.e., affordability, social desirability, and protecting the environment) presented in three modalities (textual vs. visual vs. textual with visual).

Processing of UCAs through central and peripheral routes. Study 1 indicated that irrespective of the level of involvement with environmental issues, UCA presented in textual modality increased central processing. This supports the extant literature that textual information is processed centrally (Braverman, 2008; Walker et al., 2008; Whittler & Spira, 2002). Given central processing can form enduring and favorable attitudes toward an advertisement (Bhutada et al., 2017), this could imply the UCA presented through textual modality will form an enduring attitude toward sustainable apparel. Extant literature primarily focuses on the need for having a high involvement with an issue to process it centrally (Braverman, 2008; Bhutada et al., 2017; Cacioppo & Petty, 1984; Petty & Cacioppo, 1986; Walker et al., 2008; Whittler & Spira, 2002). Even though sustainable apparel is perceived and described primarily as pro-environmental (Harris et al., 2016; McNeill & Moore, 2015), the present study evinced it is not required to have a high involvement with environmental issues for centrally processing sustainable apparel. Involvement with sustainable apparel could increase by linking consumers' own concerns with sustainable apparel. This enhanced involvement with sustainable apparel is evinced in the present study in the form of increased central processing of the UCA presented in textual modality.

However, the present study did not test the degree to which the change in involvement with sustainable apparel took place. Future studies can measure involvement with sustainable apparel before and after being exposed to the UCAs, thereby indicating the change in the degree of involvement with sustainable apparel due to the thoughtful elaborations of the UCAs.

However, high central processing does not mean textual modality cannot be processed peripherally. The present study indicated although central processing is higher than peripheral processing when UCA is presented in textual modality, peripheral processing may also occur. This supports emerging literature on ELM that central processing can happen along with peripheral

processing, where peripheral processing leads to central processing, due to increased involvement with the issue evaluated (Kang et al., 2006; Xu, 2015). This further corroborates the significance of integrating consumers' concerns with advertisements for sustainable apparel, to increase relevance to consumers, irrespective of their involvement with environmental issues.

Similarly, Study 1 indicated UCA in textual with visual modality increases central processing, irrespective of the level of involvement with environmental issues. However, textual with visual modality can be processed both peripherally and centrally. This supports extant literature that peripheral cues coupled with central cues may enhance the ability to elaborate messages (Poiesz & Robben, 1996), due to an enhanced level of involvement with the message, leading to central processing of advertisements (Hennessey & Anderson, 1990). Because the elaboration of messages is contingent upon adequacy of information as well (Poiesz & Robben, 1996), it can be further inferred that visual and textual information in the present study built upon each other, strengthening the overall argument in the UCA in textual with visual modality that sustainable apparel can satisfy consumers' concerns, thereby leading to an increase in central processing. Additional analyses indicated no significant difference in the central processing of UCAs presented in textual and textual with visual modalities. This further supports extant literature that visuals do not necessarily act as a distraction when presented with textual information, but rather enhance the persuasiveness of the message argument (Kang et al., 2006; Xu, 2015).

However, the present study did not directly measure the persuasiveness of the message arguments communicated through the textual, visual, and textual with visual modalities. Future research could be conducted to investigate the differential effect of the message modalities on persuasiveness of the message argument communicated in the UCAs.

Study 1 further indicated UCA in visual modality increased central processing when involvement with environmental issues was high. This supports extant literature that in the absence of central cues (e.g., textual information) self-generated issue-relevant thoughts can lead to central processing among individuals with a high involvement with the issues processed (Chang, 2011). Given the visuals in the UCA conveyed consumers' concerns, self-generated issue-relevant thoughts (e.g., about affordable sustainable consumption, style, self-expression, environment protection) may have been generated, revolving around these concerns and thereby leading to central processing of the UCA. UCA in visual modality increased peripheral processing when involvement with environmental issues was low. This supports extant literature that peripheral cues (e.g., visuals) lead to automatic and effortless processing among individuals with low-issue involvement. However, central processing was not absent for UCA in visual modality when involvement with environmental issues was low. This further indicates the significance of incorporating consumers' concerns in advertisements for sustainable apparel, then central processing can occur when consumers' involvement with environmental issues is low and the message is presented in visual modality. More importantly, the present study suggests it is not the modality of the cue (e.g., textual, visual, textual with visual), but rather the relevance of the content of the UCA that results in central processing.

Affective response toward sustainable apparel evoked from the central and peripheral processing of UCAs. Study 1 indicated that central processing of UCA positively influenced a favorable affective response in the form of desire for sustainable apparel and negatively influenced an unfavorable affective response in the form of boredom toward sustainable apparel. This supports the extant literature that high message elaboration results in positive thoughts about the object evaluated under strong message arguments (Chou et al., 2011). Previous studies mentioned

sustainable apparel is often perceived as boring, incapable of self-expression and following style (Harris et al., 2016; McNeill & Moore, 2015). However, the present study provides evidence that when the concern for social desirability in terms of maintaining style and self-expression is incorporated in the UCA, desire for sustainable apparel is evoked and boredom toward sustainable apparel is lowered. Additionally, sustainable apparel is generally perceived as expensive (Harris et al., 2016). As such, the present study indicates that when sustainable apparel is presented as fashionable, affordable, and environmentally friendly, it could further evoke desire and lower boredom toward sustainable apparel.

Study 1 has operationalized the positive and negative affective response toward sustainable apparel as desire and boredom, respectively. There could be other relevant affective responses evoked from the central and peripheral processing of the UCAs which were not measured in Study 1. Future studies could explore the range of affective response toward sustainable apparel, that could influence intentions for SAC.

Study 1 also indicated peripheral processing in terms of effortless processing positively influenced favorable affective response in the form of desire for sustainable apparel and negatively influenced unfavorable affective response in the form of boredom toward sustainable apparel. However, peripheral processing on the basis of attractiveness of UCA did not evoke any affective response toward sustainable apparel. This indicates at least some degree of processing is required to evoke an affective response toward sustainable apparel. That is, an affective response toward sustainable apparel could not be evoked by merely making an advertisement attractive. This supports the extant literature that self-congruency (e.g., how the object being evaluated matches the self-image of the evaluator) can be a peripheral cue in forming an attitude for a product (Chang, 2002). Therefore, when consumers see the congruence between their concerns and the concerns

communicated through the UCA, a favorable affective response in the form of desire for sustainable apparel increased and unfavorable affective response in the form of boredom toward sustainable apparel decreased. Mere attractiveness of UCA might not be sufficient to generate feelings of such congruency, thereby failing to evoke any kind of affective response toward sustainable apparel.

UCA in textual and visual modalities positively influenced favorable affective responses toward sustainable apparel in the form of desire. This supports extant literature that messages with strong arguments (Chou, Lien, & Liang, 2011; Sanbonmatsu & Kardes, 1988) and sensational values (Kang et al., 2006; Xu, 2015) evoke a positive affective response. However, UCA in textual with visual modality did not significantly evoke a favorable affective response toward sustainable apparel. This contradicts the extant literature, which suggests coupling central cues with peripheral cues leads to higher attention and an affective response (Kang et al., 2006; Xu, 2015). One possible explanation for this contradictory finding could be that the present study conceptualized favorable affective response toward sustainable apparel as desire. Therefore, it is possible that coupling textual message with visuals in UCA increased the attention and arousal level to such an extent that the affective response was different and stronger than for desire (e.g., satisfaction, excitement), which was not a part of the present study. Moreover, none of the modalities evoked unfavorable affective responses toward sustainable apparel in the form of boredom. This further corroborates support for UCA in ability to evoke favorable affective responses toward sustainable apparel.

Central processing mediates the relationships between UCA presented in textual modality and affective response toward sustainable apparel. Central processing also mediates the relationship between UCA presented in textual with visual modality and affective response toward sustainable apparel. Therefore, these findings explain the mechanism behind evoking an affective response toward sustainable apparel; central processing of UCA presented in textual and textual with visual

modalities positively influences favorable and negatively influences unfavorable affective responses toward sustainable apparel. This indicates central processing for UCA presented in textual and textual with visual modalities has the ability to strengthen the favorable affective response and weaken the unfavorable affective response toward sustainable apparel. Peripheral processing did not mediate the relationship between UCA presented in visual modality and affective response toward sustainable apparel. One possible explanation for this could be the strong central processing of UCA presented in visual modality, due to high issue relevance with consumers.

Affective response toward sustainable apparel influencing the purchase intention for sustainable apparel. Study 1 further indicated a favorable affective response toward sustainable apparel in the form of desire positively influences purchase intention for sustainable apparel and an unfavorable affective response toward sustainable apparel in the form of boredom negatively influences purchase intention for sustainable apparel. This supports extant literature that an attitude toward advertisements can directly influence purchase intention when consumers find the message arguments credible (Lord et al., 1995). Specifically, a happy state of mind can positively influence pro-environmental intentions (Antonetti & Maklan, 2014; Joo & Lee, 2014). Extant literature suggests anticipatory emotions (e.g., pride, guilt, pleasure, nervousness) toward pro-environmental behaviors influences pro-environmental behavioral intentions (Onwezen et al., 2014; Rezwani et al., 2017). The present study expands this literature by evincing both when the primary concern is to protect the environment (i.e., pro-environmental behavioral intention) and to satisfy other non-pro-environmental behavioral intentions (e.g., consume sustainable apparel affordably and project one's ethical image to others), UCAs can evoke a positive affective response toward sustainable apparel in the form of desire; such a positive affective response can translate into purchase intention for sustainable apparel. Even though unfavorable affective response in the form of boredom can

negatively influence purchase intention for sustainable apparel, central processing of UCA can lower the degree of boredom, which, in turn, can minimize the negative influence of boredom on purchase intention for sustainable apparel. Future studies can explore how other affective responses toward sustainable apparel mediate the relationship between the routes of processing the UCAs and the purchase intention toward sustainable apparel.

Study 2

Study 2 was conducted to empirically test how individual concerns of affordability, social desirability, and environment protection in UCA were appraised, how this appraisal evoked specific classes of emotional responses toward sustainable apparel, and how these emotional responses influenced purchase intention for sustainable apparel. This study drew from the theoretical frameworks of the multilayered model of product emotions (Desmet, 2003), information processing model (Leder et al., 2004), and the theory of emotional appraisal in aesthetic experience (Silvia, 2009). While Desmet's (2003) model was used to explain the mechanism behind developing the hypotheses, the theoretical frameworks for Leder et al. (2004) and Silvia (2009) were used to explain the underlying psychological mechanism in developing the hypotheses. Next, the findings for Study 2 are discussed in relation to the aforementioned theoretical frameworks and extant literature.

Effect of UCA concerns on purchase intention toward sustainable apparel. Study 2 indicated no significant difference in the effects for the three concerns on purchase intention for sustainable apparel. For all three concerns (i.e., affordability vs. social desirability vs. environment protection), purchase intention for sustainable apparel was significantly higher than a neutral standpoint (i.e., neither agreeing nor disagreeing to have an intention to purchase sustainable apparel). However, as the perceived content reflecting concern for environment protection in UCA

increased, the purchase intention for sustainable apparel increased. This supports extant literature that because consumers are skeptical about the greenness of a sustainable product (Bezencon & Etemad-Sajadi, 2015; Magnier & Schoormans, 2015; Ramirez, 2013), strong verbal and visual claims are needed to convince consumers of a product's greenness and positively influence purchase intention for sustainable products (Magnier & Schoormans, 2015). Therefore, not just content, but the amount of information conveying concern for protecting the environment in UCA will encourage a higher purchase intention for sustainable apparel, possibly by minimizing consumers' skepticism about the green claims in UCA. However, increasing the perceived amount of content reflecting concerns for affordability and social desirability in UCA may not increase purchase intention for sustainable apparel. Therefore, mere inclusion of concerns for affordability and social desirability in the UCA can encourage purchase intention for sustainable apparel, irrespective of the perceived amount of content reflecting these concerns in UCAs. This supports extant literature that instead of focusing on environmental benefits, emphasizing benefits to consumers from sustainable products can encourage sustainable consumption behaviors (Font et al., 2018; Ramirez, 2013). Also, offering sustainable products at a comparable price as that for non-sustainable products and convincing consumers they are not paying a premium for being sustainable can encourage sustainable consumption (Ramirez, 2013). In the context of sustainable apparel, the present study expands the literature (Harris et al., 2016; McNeill & Moore, 2015) that making sustainable clothing affordable and appreciable in the social setting can encourage sustainable apparel consumption. Future research could explore the ways to make sustainable apparel affordable yet available in various styles and varieties.

O'Rourke and Ringer (2016) mentioned that sustainable cues in textual modality do not translate into sustainable purchase intention unless consumers are already engaged in sustainable

consumption behaviors. Magnier and Schoormans (2015) suggested textual with visual cues are effective in enhancing sustainable purchase intentions, even among consumers with low involvement with environmental issues. However, the present study did not find any significant interactions between consumer concerns and modality on the purchase intention for sustainable apparel. Therefore, irrespective of whether the concerns in UCAs are presented in textual or textual with visual modalities, their effects on purchase intention for sustainable apparel will not differ significantly. This further alludes to the significance of incorporating consumers' concerns in advertisements for sustainable apparel, which can translate into purchase intention for sustainable apparel, irrespective of the modality through which the concerns were communicated.

Differential effects of the UCA concerns on the appraisals of the sustainable apparel. Study 2 further indicated that UCA with a high concern for affordability leads to a higher appraisal of motive compliance in sustainable apparel in terms of perceived barriers toward affordable sustainable apparel consumption, as compared to intrinsically pleasant or legitimate. Therefore, when a concern for consuming apparel affordably is conveyed in the UCA in terms of perceived barriers toward affordable sustainable apparel consumption (e.g., difficulty in buying expensive sustainable apparel), appraisal of sustainable apparel in terms of motive compliance increased. This supports Desmet's (2003) model in that when an individual has the concern for accomplishing a goal, an object is appraised in terms of its ability to comply with the motive for accomplishing this goal. However, the UCA with a concern for affordability did not have any significant influence on appraisal of motive compliance in terms of perceived benefits of affordable sustainable apparel consumption. This indicates consumers are likely to place more emphasis on how sustainable apparel consumption can be difficult to comply with their motive of buying affordably rather than how affordable sustainable consumption could help them comply with their motive of staying

within a budget. This supports extant literature that when consumers have low income and sustainable food prices are high (i.e., perceived barrier in sustainable consumption is high), their purchase intention for sustainable food (de Barcellos et al., 2011) and sustainable food choices are influenced by the sustainable food price (Peschel et al., 2016). Whereas, when affordability is not a concern (i.e., perceived barrier in sustainable consumption is low), consumers make sustainable food choices (Alles et al., 2017).

UCA with a high concern for social desirability led to a higher appraisal of intrinsic pleasantness in the sustainable apparel, as compared to motive compliance (for affordable sustainable apparel consumption) and legitimacy (for protecting the environment). This indicates that as the concern for projecting oneself as ethical in the social setting increased in UCA, sustainable apparel is appraised more in terms of its intrinsic pleasantness, rather than its ability to comply with the motive for buying apparel affordably or being legitimate in protecting the environment. This supports Desmet's (2003) model, suggesting when an individual has a high concern for appealingness, an object is appraised in terms of its intrinsic pleasantness. Specifically, this supports earlier findings that consumers tend to make more sustainable choices and have higher sustainable consumption intentions when in front of others than when they are in a private setting (Onwezen et al., 2014). Reference groups in the social setting can positively influence pro-environmental consumption intentions (Wang et al., 2014). For example, when consumers can share their sustainable purchases in social media, their sustainable consumption intentions are encouraged (Nghiem & Carrasco, 2016). The present study expands earlier findings how individuals socially identify themselves influences their specific nature of sustainable consumption (e.g., consumers socially identifying themselves with organic products engaging in consuming organic products). In

the context of the present study, it could be implied that the more that consumers identify themselves as ethical in the social setting, the higher their sustainable apparel consumption.

UCA with a high concern for environment protection leads to a higher appraisal of legitimacy in sustainable apparel for protecting the environment, as compared to motive compliance (for affordable sustainable consumption) and intrinsic pleasantness (for projecting oneself as ethical in the social setting). This supports Desmet's (2003) model that when an individual has concerns about meeting certain set standards, an object is appraised on its ability to meet these standards. This supports extant literature that when individuals have a high concern for the environment, they evaluate objects in terms of their potential impact on the environment (Dascher et al., 2014; Francis & Davis, 2015). Social norms for green purchasers result in higher pro-environmental behaviors (Park & Ha, 2012). Consumers evaluate sustainable products in terms of their strength of green claims to gauge the actual ability to protect the environment (Manrai et al., 1997). Sustainability information in the form of environmental scores (i.e., how the product has less negative impact on the environment) influences purchase intention for sustainable products (O'Rourke & Ringer, 2016). For example, individuals with high environmental awareness evaluate green buildings in terms of their ability to lessen negative impacts on the environment (Zhao et al., 2015). Therefore, as the concern for environment protection increases in UCA, consumers evaluate sustainable apparel in terms of its ability to protect the environment, thereby evaluating it as legitimate.

Influence of the appraisals of sustainable apparel on specific emotional classes. Study 2 further indicated the appraisal of sustainable apparel as motive compliant in terms of perceived benefits of affordable sustainable consumption positively influenced instrumental emotional response toward sustainable apparel. Appraisal of sustainable apparel as motive compliant in terms of perceived barriers toward affordable sustainable apparel consumption negatively influenced

instrumental emotional responses toward sustainable apparel. Therefore, consumers are likely to experience positive instrumental emotions (e.g., satisfied and contended) toward sustainable apparel when they find sustainable apparel is within their budget. When consumers find it difficult to stay within their budget for buying sustainable apparel, their positive instrumental emotions (e.g., satisfied and contended) toward sustainable apparel decreases. These findings support the propositions by Leder et al. (2004) and Silvia (2013), who suggested that when individuals find (vs. do not) an object congruent to their goals and concerns, they experience positive (vs. negative) emotional responses. This supports Desmet's (2003) model that suggests when individuals appraise an object as motive compliant (vs. incompliant), they experience positive instrumental emotions.

Appraisal of sustainable apparel as intrinsically pleasant positively influenced an aesthetic emotional response. Therefore, the appraisal of sustainable apparel as being able to meet an individual's concern for social desirability (by projecting his/her ethical buying to others) can evoke positive aesthetic emotions (e.g., desire, yearning) toward sustainable apparel. This finding supports Desmet's (2003) model, which suggests when individuals appraise an object as intrinsically pleasant, they experience positive aesthetic emotions. Leder et al. (2004) and Silvia (2013) said that positive emotions are evoked after comprehending the deeper meanings of an aesthetic stimulus through aesthetic judgment of the stimulus. Linking this with the findings of the present study, it can be implied that when individuals comprehend the potential of sustainable apparel in projecting an ethical image to others, they experience positive aesthetic emotion toward sustainable apparel.

Appraisal of sustainable apparel as legitimate positively influenced a social emotional response. This finding supports Desmet's (2003) model, which suggests that when individuals appraise an object as legitimate, they experience positive social emotions. Silvia (2013) stated that social and self-conscious emotions (e.g., pride, guilt, regret, and embarrassment) are evoked,

depending on whether an individual is able to behave according to his/her values. Antonetti and Maklan (2014) and Rezwani et al. (2017) mentioned anticipatory emotions, such as pride, could be evoked, depending on whether or not an individual can make a purchase decision by complying to pro-environmental values. The present study expands this literature by indicating the appraisal of sustainable apparel as protecting the environment evokes positive social emotions (e.g., admiration, impressed) toward sustainable apparel.

Influence of the emotional responses on purchase intention for sustainable apparel. Study 2 also found that instrumental, aesthetic, and social emotional responses positively influenced purchase intentions for sustainable apparel. This indicates that irrespective of the specific emotional class, a positive emotional response can encourage purchase intention for sustainable apparel. Additional analysis indicated both dimensions of motive compliance had significant indirect influences on purchase intention for sustainable apparel through an instrumental emotional response. Legitimacy had a significant indirect influence on purchase intention for sustainable apparel through social emotional response. Intrinsic pleasantness had a significant indirect influence on purchase intention for sustainable apparel through aesthetic emotional response. These findings support extant literature that a happy state of mind can positively influence immediate pro-environmental intentions (Antonetti & Maklan, 2014; Joo & Lee, 2014; Onwezen et al., 2014; Park & Ha, 2012; Rezwani et al., 2017) and anticipatory emotions can positively influence purchase intentions for sustainable products (Antonetti & Maklan, 2014).

Motive compliance in terms of perceived barriers toward affordable sustainable apparel consumption mediated the relationship between UCA with a concern for affordability and instrumental emotional response. However, motive compliance in terms of perceived benefits of affordable sustainable apparel consumption did not mediate the relationship between UCA with a

concern for affordability and instrumental emotional response. Therefore, only motive compliance in terms of perceived barriers toward affordable sustainable apparel consumption explained the mechanism behind the influence of concern for affordability on instrumental emotional response. The lower the perceived barriers toward affordable sustainable apparel consumption, the higher the positive influence of concern for affordability on instrumental emotional response is. Intrinsic pleasantness mediated the relationships between UCA with a concern for social desirability and aesthetic emotional response. Therefore, appraisal of sustainable apparel as intrinsically pleasant explained the mechanism behind the influence of concern for social desirability on aesthetic emotional response. The higher the appraisal of sustainable apparel as intrinsically pleasant is, the higher the positive influence of concern for social desirability on aesthetic emotional response is. Legitimacy mediated the relationship between UCA with a concern for protecting the environment and social emotional response. Therefore, appraisal of sustainable apparel as legitimate explained the mechanism behind the influence of concern for protecting the environment on social emotional responses. The higher the appraisal of sustainable apparel as being legitimate to protect the environment, the higher the positive influence of concern for protecting the environment on social emotional responses is.

Chapter 6: Conclusions and Implications

This chapter highlights the conclusions of the present study and discusses the theoretical, managerial, and societal implications of the findings.

Conclusions and Theoretical Implications

There is an indisputable urgency to protect the environment from negative impacts of unsustainable apparel consumption. Despite repeated mention in the extant literature that high environmental knowledge, concerns, awareness, or attitudes cannot necessarily translate into sustainable consumption intentions (Alles et al., 2017; Brough et al., 2016; de Barcellos et al., 2011; Peschel et al., 2016), there is limited research on alternative ways to encourage sustainable apparel consumption. In other words, the current literature fails to address the means to fill the gap between the pro-environmental/sustainable attitude and pro-environmental/sustainable consumption behavior. Therefore, the present studies drew from an emerging idea that consumers' intentions for sustainable apparel could be encouraged by communicating consumers' benefits (or concerns) for sustainable products, rather than merely environmental benefits (Font et al., 2018). The present studies filled important literature gaps by providing empirical evidence that UCAs can result in favorable appraisal of sustainable apparel and evoke favorable emotional responses toward sustainable apparel, thereby translating into positive purchase intention for sustainable apparel.

These studies contributed to the theory building for ELM (Petty & Cacioppo, 1984) by delineating how UCAs in textual, visual, and textual with visual modalities are processed. ELM posits how central and peripheral processing form enduring or temporary attitudes toward an object (Petty & Cacioppo, 1984). Expanding this, the present studies conceptualized attitudinal outcomes as affective responses toward sustainable apparel and explained how UCAs could evoke affective responses toward sustainable apparel after completing specific processing. These studies further

contributed to the emerging literature that an object could be processed both centrally and peripherally, rather than only central or peripherally (Kang et al., 2006; Xu, 2015). More importantly, these studies evinced that by increasing the relevance of the advertisement content to its evaluator, even a visual cue (widely described as peripheral cue in the literature, e.g., Braverman, 2008; Gelinas-Chebat & Chebat, 1992; Jones et al., 2006; Walker et al., 2008) in the UCA could be processed centrally, irrespective of the level of involvement with environmental issues. UCAs in textual (widely described as central cue in the literature, e.g., Braverman, 2008; Lee & Ahn, 2017; Walker et al., 2008) and textual with visual modality are primarily processed centrally, along with some degree of peripheral processing, irrespective of the level of involvement with environmental issues. Therefore, the present studies open an important area of consideration for researchers and marketers in the context of ways for encouraging intentions for sustainable apparel consumption when consumers' involvement with sustainable apparel cannot be enhanced by increasing consumers' concern for environment. Alternative ways for increasing consumers' involvement with sustainable apparel should be sought by identifying their competing concerns for apparel consumption. The present studies identified and provided empirical evidence for the significance of incorporating cues for consumers' concerns (i.e., affordability, social desirability, and environment protection) by encouraging purchase intentions for sustainable apparel.

Further, studies grounded in the theoretical framework of ELM (Areni & Lutz, 1988; Bitner & Obermiller, 1985; Cacioppo & Petty, 1984; Kang et al., 2006; O'Keefe, 2008; Petty & Cacioppo, 1986; Wilson, 2007) primarily focused on developing cognitive attitude toward an object/issue being evaluated through peripheral and/or central routes. The present study evinced the applicability of the theoretical framework of ELM in the context of evoking affective attitude toward sustainable apparel, thereby contributing to the theory building of ELM. Additionally, ELM is primarily used to

explain the mechanism behind developing attitude toward an object/issue through various routes of persuasion as a function of different modalities of the cues (e.g., textual, visual, textual with visual, audio, audio-visual) being evaluated. However, limited studies are there in the context of translating that attitude toward a desired behavioral outcome. The present study contributed to filling this literature gap by evincing how attitude toward sustainable apparel in the form of desire or boredom could influence the behavioral outcome in terms of the purchase intention for sustainable apparel.

The present study also contributed to the theory building of Desmet's (2003) multilayered product emotions model, Leder et al.' s (2004) information processing model, and Silvia's (2009) theory of emotional appraisal in aesthetic experience. While Desmet's (2003) model has been widely used in studies related to industrial design, the present study evinced its applicability in the context of sustainable apparel. Specifically, the present study evinced the specific nature of appraisal of sustainable apparel (i.e., motive compliance, intrinsically pleasant, legitimate) as a function of individual concerns for affordability, social desirability, and environment protection in UCA. More importantly, the present study showed that specific kinds of sustainable apparel appraisal evoke specific emotional responses. Therefore, they contribute to theory building by evincing it is insufficient to describe emotional responses toward sustainable merely as favorable or unfavorable. A specific class of emotional response should be described, which could be particularly important to evoke positive purchase intentions for sustainable apparel as a function of certain nature of appraisal of sustainable apparel (e.g., motive compliant, intrinsically pleasant, legitimate) and concern for apparel consumption.

Therefore, the present study contributed to theory building by first explaining the underlying psychological processing of UCAs with all the three concerns communicated together, followed by their roles to evoke favorable and minimize unfavorable affective responses toward sustainable

apparel, and translating into positive purchase intention for sustainable apparel. Second, the studies explained the nature of psychological appraisals for sustainable apparel as a function of individual concerns communicated through UCAs, evoking specific classes of emotional response, translating into positive purchase intentions for sustainable apparel.

Specifically, the present study has integrated the three theoretical frameworks— Desmet's (2003) multilayered product emotions model, Leder et al.' s (2004) information processing model, and Silvia's (2009) theory of emotional appraisal in aesthetic experience and proposed a new comprehensive conceptual model in the context of UCAs for sustainable apparel. To the best of my knowledge, there is no such comprehensive theoretical model in the extant literature in the context of UCAs for sustainable apparel. This filled an important gap in the literature. In this model, I have delineated how sustainable apparel presented through UCAs could be evaluated through different automatic (i.e., perceptual analysis and implicit memory integration) and deliberate (i.e., explicit classification and cognitive mastering) stages leading to aesthetic evaluation of sustainable apparel (e.g., in terms of motive compliant, intrinsically pleasant, and legitimate) and evoking aesthetic emotional response toward sustainable apparel (e.g., in terms of instrumental, aesthetic, and social emotions). I have further delineated how an individual's existing knowledge about/prior experience of sustainable apparel advertisements help form the needful coping potential (i.e., the ability to decipher the underlying meaning of an object) to understand how the sustainable apparel presented in the UCAs could be relevant to their needs.

For example, on one hand, I have posited that the common cues related to sustainability (e.g., green colors, images of leaves and flower, and keywords such as sustainable, environmentally friendly) will evoke a sense of familiarity with the sustainable apparel being advertised in the UCA. On the other hand, the user-centric appeals (e.g., how sustainable apparel could meet consumers'

concerns for affordable consumption and present oneself as ethical in the social setting) will evoke a sense of unfamiliarity with the sustainable apparel because the advertisements currently used by the sustainable apparel brands do not focus on consumers' concerns. As such, having a feeling of both familiarity and unfamiliarity with the sustainable apparel in the UCAs, the individuals are likely to experience surprise first, followed by an interest for the sustainable apparel that can effectively meet their concerns. These favorable emotional responses will create the needful stimulus hunger (i.e., the need to know more about the object) about the sustainable apparel, leading to further automatic and deliberate evaluations of sustainable apparel, aesthetically judging sustainable apparel (i.e., the degree to which it meets their needs), and finally evoking favorable aesthetic emotions toward sustainable apparel. This study further evinced how specific classes of emotions could translate into a high purchase intention for sustainable apparel.

These studies further contributed to the literature by indicating the reliability and validity of new measurement scales for perceived affordability for sustainable apparel, legitimacy of sustainable apparel to protect the environment, and intrinsic pleasantness of sustainable apparel. However, these scales were used in a millennial sample of the U.S. Therefore, future studies should test the reliability and validity of these scales in different populations, both in terms of generational cohorts and nationality. Also, the current study primarily focused on consumers' concerns for affordability, social desirability, and environment protection. Future studies can explore other concerns that could influence intentions for sustainable apparel consumption.

Managerial Implications

The present studies provide many direct marketing implications. First, sustainable apparel brands can encourage purchase intention for sustainable apparel by using UCAs. As such, the modality of a UCA is not very important because all three modalities are likely to increase the

relevance of sustainable apparel to consumers, due to the user-centric appeals conveyed by the advertisements. However, with an increase in consumers' degree of involvement with environmental issues, the influence of the amount of textual with visual information on central processing could become attenuated. Therefore, when a brand's target market has high involvement with environmental issues, investing in creating UCAs with large amounts of textual and visual information together may not result in high elaborations of sustainable apparel. Rather, extensive elaboration of sustainable apparel will be primarily influenced by consumers' high involvement in environmental issues.

Second, given that the extensive elaborations (central processing) of UCAs evoke favorable affective responses and minimize negative affective responses toward sustainable apparel, sustainable apparel brands should strongly focus on communicating how consumers' concerns could be satisfied through sustainable apparel, rather than asking for self-transcendent behaviors to protect the environment. As such, marketers should remember that several classes of favorable emotions (i.e., instrumental, social, aesthetic) could link to sustainable apparel through the UCAs. When marketers want to evoke a specific class of favorable emotional response toward sustainable apparel (e.g., satisfaction), they can make the consumers engage in a specific appraisal (e.g., motive compliance) of sustainable apparel by incorporating the specific concern in UCA (e.g., affordability), that results in this appraisal. Therefore, if a specific emotional response is particularly desired to encourage purchase intention for sustainable apparel among a target market, the concerns in UCAs could be incorporated accordingly, giving the marketers some degree of predictability on the class of emotional response.

Third, UCAs in all three modalities encourage purchase intention for sustainable apparel, without any significant differences in their effects. However, the perceived focus in the UCA in

conveying the concern for environment protection can further positively influence purchase intentions for sustainable apparel. Therefore, while mere inclusion of concerns on affordability and social desirability can encourage purchase intention for sustainable apparel, sustainable apparel brands should focus on the amount of information conveying the concern for protecting the environment; this may lower the perceived skepticism about the greenness of sustainable apparel. However, the present studies have not directly investigated the roles of perceived skepticism in influencing the relationship between the three concerns and purchase intention for sustainable apparel. Future studies can fill this gap.

Fourth, the appraisal of specific concerns can also indirectly and positively influence purchase intention for sustainable apparel by evoking certain classes of emotional response toward sustainable apparel. Therefore, apparel brands should focus on ways to evoke favorable emotional responses toward sustainable apparel through specific concerns in the UCAs.

Fifth, adapting Vetta's concept of sustainable apparel capsules (i.e., a certain number of clothing items mixed and matched to create different ensemble) in the UCAs, the present study evinced the importance of explicitly revealing the scopes of sustainable apparel in meeting consumers' concerns for affordability, style, and self-expression. Vetta is currently primarily using implicit cues (e.g., stating how different styles could be created by certain clothing items without explicitly communicating how it can help save money, aid in self-expression, and protect the environment). As such, despite having a creative way for encouraging sustainable apparel consumption, Vetta is losing opportunities in tapping a wider target audience who place great importance in consuming apparel affordably and wearing apparel for style and self-expression. For example, if five clothing items can create an equivalent of 20 ensemble, it is indirectly saving money worth 15 different ensemble. Stating the dollar amount of such savings can significantly aid

in appraising sustainable apparel as affordable in the long-term even if the individual clothing items appear expensive in the short-term. The present study emphasizes on the importance of explicitly mentioning how sustainable apparel could meet consumers' concerns by using textual and textual with visual cues. Therefore, sustainable apparel brands and marketers should use UCAs for explicitly mentioning the direct benefits of sustainable apparel consumption, instead of relying on consumers' willingness to engage in extensive thinking about sustainable apparel (e.g., how sustainable apparel meets their needs) from implicit cues presented in sustainable apparel advertisements.

Another alternate way for encouraging sustainable apparel consumption could be in terms of increasing intentions for purchasing used apparel or renting apparel. As such, buying used apparel or renting apparel could be inexpensive, thereby meeting consumers' need for consuming apparel affordably. However, literature states that wearing used/recycled apparel often creates a sense of social disapproval (McNeill & Moore, 2015). In such cases, sustainable apparel brands and marketers could share testimonials of consumers who have faced social disapproval for trying to protect the environment by wearing used/recycled apparel or renting apparel. Such testimonials shared in the social media may in turn evoke a sense of guilt among the individuals who were involved in socially disproving the idea of consuming used/recycled apparel or renting apparel for protecting the environment. Because a guilt for not consuming sustainable products can evoke future intentions for purchasing sustainable products (Antonetti & Maklan, 2014; Antonetti & Maklan, 2014;), such testimonials could positively influence intentions for purchasing sustainable apparel as well. In the long run, such testimonials may help attenuate the stigma associated with consuming used/recycled apparel or rented apparel and aid in protecting the environment. However, the present study did not test the influence of guilt on the purchase intention of sustainable apparel.

Future research can explore the influence of guilt and other negative emotions on intentions for sustainable apparel consumption.

Depending upon the target market consumers' concerns for apparel consumption could vary. As such, marketers should identify the other competing needs that their target market may have and communicate through UCAs how sustainable apparel could meet those concerns. Since there were no significant difference in the purchase intention for sustainable apparel between the different modalities through which the UCAs were presented (i.e., textual, visual, and textual with visual), the sustainable apparel brands can explore other modalities (e.g., audio, audio-visual) with which the UCAs could be presented. For example, if a UCA is presented in YouTube, it would primarily employ audio or audio-visual modalities. Such UCAs in audio or audio-visual modalities may help grab the attention of millennials or generation Z consumers who are frequent users of YouTube and similar platforms.

Since emotional response plays an important role in positively influencing the purchase intention for sustainable apparel, sustainable apparel brands should explore melodies and images that can evoke positive emotional response toward sustainable apparel. For example, certain notes in music can evoke certain emotions (e.g., sadness is evoked by *raga Shivranjani, Malkauns;* happiness is evoked by *raga Hansdhwani, Desh,* etc., where a raga is created by arranging musical notes in specific ways to evoke certain moods). Certain elements of design evoke certain emotions (e.g., happiness is expressed by warm colors and rounded shapes). Creating UCAs by manipulating the musical notes and design elements can further evoke specific classes of emotions and aid toward sustainable apparel purchase intentions. Future studies can explore how different musical notes and design elements could be used to encourage sustainable apparel consumption.

Societal Implications

The present study evinced purchase intention for sustainable apparel can be encouraged without making consumers feel they are sacrificing their concerns for buying affordably and presenting desirably in the social setting (e.g., projecting one's style, self-expression, ethical image) for protecting the environment. Therefore, effective UCAs could be used to encourage sustainable apparel consumption as a short-term outcome by making sustainable apparel more meaningful and relevant for consumers' concerns. Future studies can explore other relevant concerns that can make sustainable apparel more meaningful and relevant for consumers, enhancing intentions for sustainable apparel consumption.

Limitations and Future Scopes of Research

In this section, limitations of the present study are discussed and scopes for future studies are suggested. First, a non-random selection through homogenous sampling in the present study posed a threat to external validity of the findings (Bracht & Glass, 1968; Ferguson, 2004). Study 1 considered only female millennials residing in the U.S., rather than both male and female millennials or consumers from other generational cohorts and locations. Therefore, the findings for Study 1 lacked generalizability for male millennials or consumers from other generational cohorts or locations. This limitation was addressed to some extent in Study 2. Even though Study 2 tested a different conceptual model, it still investigated the effect of UCAs on purchase intention for sustainable apparel, by considering male millennials in addition to female millennials from the U.S. Despite these limitations, this sampling method was used because homogenous sampling provides deeper insights about a particular population sharing similar characteristics (Etikan et al., 2016). Millennials form the largest generational cohort in the U.S. (Pew Research Center, 2019) and female consumers engage in sustainable consumption more than male consumers (Cho et al., 2015;

Luchs et al., 2012). Therefore, having deeper insights about how female millennials (Study 1) and millennials (Study 2) of the U.S. process advertisements for sustainable apparel will help marketers develop advertisements and/or marketing strategies specifically for this target market to encourage intentions for purchasing sustainable apparel more effectively.

Furthermore, given the participants were recruited from an existing consumer panel (i.e., MTurk) and were compensated for participating in the survey, a pre-existing attitude of the subjects toward participating in the study might have confounded the findings of the study, thereby compromising internal validity of the experiments. Researchers have also mentioned several challenges related to data collection from MTurk (Goodman et al., 2013; Mitra et al., 2015; Woo et al., 2015). For example, there could be untruthful, careless, and biased responses (Woo et al., 2015). Biased and untruthful responses in the online surveys based on self-reports on MTurk are often due to factors related to social desirability (Antin & Shaw, 2012). Since the present study relates to sustainability, the potential for biased and untruthful responses increases for presenting oneself as socially/ethically desirable. However, since the data was collected anonymously, the need to present oneself as socially/ethically desirable is considered minimal among the MTurk workers.

Further, MTurk workers often participate in the same study repeatedly to receive more participation compensation (Woo et al., 2015). As such, to get reliable responses from MTurk, usage of screening and attention check questions is recommended (Goodman et al. 2013). Since the present study has used both screening and attention check questions, the data are considered reliable. The reliability and validity check further showed that the measurement scales used in the study were reliable and valid. Future studies could be conducted in a laboratory setting, where participants would be exposed to the stimuli and respond to the questionnaire in a pre-designated physical location. As such, it would minimize repeated participation. Eye-tracking technology could

also be used to monitor if the participants have paid attention to all the critical parts of the UCA stimuli, enhancing the internal validity of the experiment.

Despite many limitations, MTurk forms a rich source of female millennials (Buhrmester et al., 2011), which facilitated the purposive sampling and saved resources (e.g., time, money) for recruiting participants. Sampling all participants only from MTurk also minimized selection bias (i.e., a threat to internal validity), by keeping the selection criteria constant across the different treatment groups. However, further research is required to test the generalizability of the proposed conceptual models in the context of other generational cohorts and consumers from different countries of residence.

Furthermore, the present study measured the control variable affordability for apparel by using a measurement scale, rather than relating actual income and purchasing power of the participants, thereby reducing the internal validity of the findings. However, studies indicated explicit income-related (e.g., exact amount of income) questions result in non-responsiveness (Ralph, 1984; Riphahn & Serfling, 2005). Therefore, it is expected that self-reported ratings on the affordability measurement scale reduced non-responsiveness. Future studies can control for both actual income and perceived affordability to enhance the internal validity of the experiments testing the proposed conceptual models.

Moreover, the present study used researcher-created advertisements for two fictitious brands. They may have lost realism and generalizability in the context of real-world advertisements. However, several studies used advertisements with fictitious brand names to minimize confounding effects due to prior brand familiarity (Bhatada et al., 2017; Jiang & Tao, 2012; SanJosé-Cabezudo et al., 2009). Therefore, it is expected the advertisement stimuli with fictious brand names enhanced the internal validity of the experiments. Future research could test the proposed conceptual models

by exposing participants to real world advertisements and controlling for any potential effects of brand familiarity on the proposed relationships.

Further, the present study has operationalized sustainable apparel consumption in terms of the purchase intention for sustainable apparel, rather than the actual behavior of purchasing sustainable apparel. Future studies can investigate how UCAs can encourage sustainable apparel purchase behavior in retail settings. Also, sustainable apparel consumption could also be in the form of recycling/reusing/renting apparel. The present study did not investigate how UCAs could influence consumers' intentions for recycling/reusing/renting apparel. Future studies can address this gap.

The present study also did not measure the extent to which the participants already engaged in sustainable apparel consumption before participating in the study. Therefore, pre-existing attitude toward sustainable apparel consumption may have confounded the findings of the study. However, since the participants were randomly assigned in the different treatment groups (i.e., the UCAs) the confounding effect due to pre-existing attitude toward sustainable apparel is considered minimal. Future studies can explore the change in the attitude toward sustainable apparel after being exposed to the UCAs. As such, it will bring more clarity in explaining the efficacy of UCAs in positively influencing favorable attitude toward sustainable apparel and intentions for sustainable apparel consumption.

Finally, data collection for Study 1 and Study 2 took place before and at the early onset of COVID-19 in the U.S., respectively. Since COVID-19 has severely affected the psychological wellbeing of people around the world (Addo et al., 2020; Ahmed et al., 2020; Hao et al., 2020; Kirk & Rifkin, 2020; Taylor et al., 2020), Mturk workers' attitude toward responding to the surveys before and after the onset of the pandemic might have changed. This may have confounded the

findings of our study. Further, the pandemic has increased intentions for online shopping, especially for food and books (Chang & Meyerhoefer, 202; Grashuis et al., 2020; Nguyen et al., 2020). The present study did not measure purchase intention for sustainable apparel in terms of the shopping destination (e.g., online vs. offline) for sustainable apparel. Future studies can explore this literature gap. The pandemic had also increased consumers' concern for the environment because poor environmental health aggravates the vulnerability to get infected by the corona virus (National Institute of Environmental Health Sciences, 2020). As such, attitude toward sustainable apparel might have changed. Consumers' change in attitude toward sustainable apparel before and after the pandemic was not measured in the present study. Therefore, the conceptual models of this study could be tested again by statistically controlling the impacts of the pandemic (e.g., psychological distress, intentions for online purchase, concern for environment). Future studies can explore how the shopping destination may influence purchase intention for sustainable apparel both during the pandemic and when the pandemic is over.

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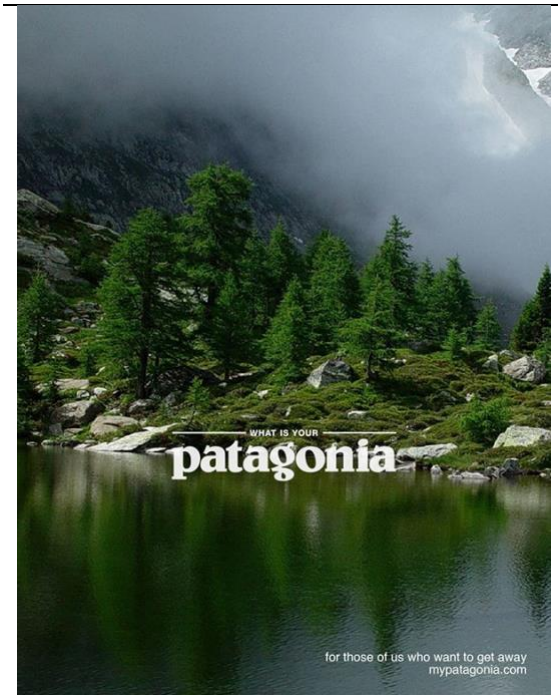
Annexure

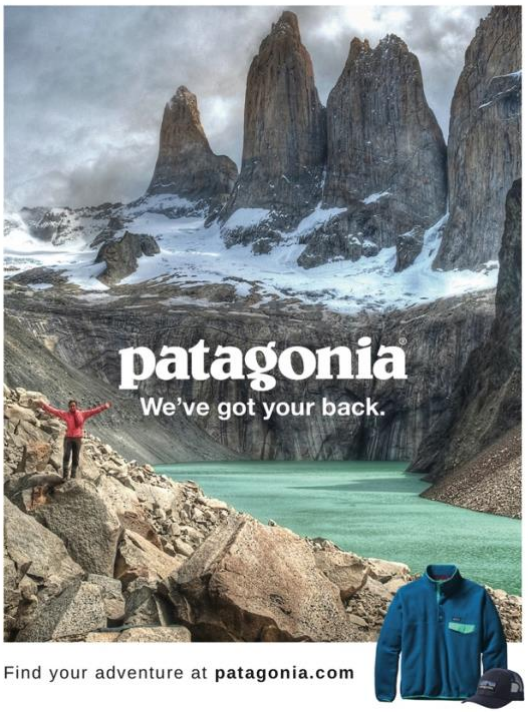
Appendix A: Examples of Sustainable Apparel Advertisements

Table 19

Analyses of Information Processing of Advertisements of Sustainable Apparel Brands based on ELM Model of Persuasion (Petty & Cacioppo, 1984)

Advertisements	Analyses on Information Processing
 (SCAD, 2013)	**Primary modality of advertisement appeal:** Visual **Information processing and plausible influence on sustainable apparel consumption:** The serene image of nature shown in the advertisement focusses on the beauty of nature, unscathed from pollution, damage, or human intrusion. These themes are automatically emerged from the image, without the need for thoughtful deliberations. Therefore, it seems that the processing will most likely be peripherally. Such processing is likely to automatically evoke positive affective response toward protecting nature's beauty. However, given that there are no visual or verbal mentions of apparel in the advertisement, it might not be explicit that sustainable apparel consumption is encouraged to protect nature. Specifically, unless the audience of this ad is already aware of Patagonia's sustainable merchandize mix, it could be difficult to decipher the underlying intentions for encouraging sustainable apparel consumption. More importantly, as individuals having high involvement with environmental issues usually care for protecting nature more than the individuals who have low involvement, it seems that this ad will positively influence intentions for sustainable apparel consumptions primarily among individuals who have high involvement for environmental issues and/or are aware of Patagonia's sustainable merchandise mix.

Advertisements	Analyses on Information Processing
 (Taner, 2016)	**Primary modality of advertisement appeal:** Visual with Textual **Information processing and plausible influence on sustainable apparel consumption:** Like the previous advertisement, the prominent background image focusses on nature's beauty, unharmed by human intrusion. The background image is likely to be automatically processed peripherally. Additionally, the prominently placed key words 'stay responsible', 'engaged' coupled with the background image cues toward the sustainable nature of the brand. As this linkage between the highlighted key words and background image happens automatically without extensive cognition, the processing of these two information pieces should be done peripherally. However, it would need greater effort and motivation to read and understand the additional piece of textual information given in the separate section; the difficulty to read could be particularly due to the small font of the text, which is probably done to maintain the serenity of the background image of nature. Therefore, reading and understanding this piece of information will demand high involvement with environmental issues, leading to central processing of information. Further, it is only mentioned in this separate section of textual information that Patagonia is a clothing company. Therefore, given that the advertisement does not have any highlighted textual information or image of offered sustainable apparel in Patagonia, this advertisement, shall positively influence intentions for sustainable apparel consumption among those individuals who have high involvement with environmental issues and/ or already aware of Patagonia's sustainable merchandise mix.

Advertisements	Analyses on Information Processing
 (McCarter, 2018)	**Primary modality of advertisement appeal:** Visual with Textual **Information processing and plausible influence on sustainable apparel consumption:** In this advertisement, Patagonia has integrated nature's beauty and human involvement. As this processing happens automatically from the background picture of the mountains and a mountaineer, it could be implied that this processing happens peripherally. However, the phrase "we've got your back" kindles further cognitions on 'from what' Patagonia has 'got our back'? Is Patagonia implying that its apparel/products are tough enough to be worn during mountaineering/adventure sports and protect the wearer? Or, is Patagonia implying that because its products are sustainable it is helping to save the future by protecting environment? Finding answers to these questions demands high involvement of the audience with adventure-related products and/or environment. Therefore, it could be implied that such processing will be done centrally. Still, it seems that this advertisement will positively influence the intentions for sustainable apparel consumption among those individuals who have high involvement with environment and/or adventure-related products. Individuals who have higher concern for other competing needs (e.g., affordability, style, or self-expression) may not find the advertisement relevant to their concerns. Therefore, this advertisement may not positively influence intentions for sustainable apparel consumption among individuals who have other competing concerns as mentioned above.
 (Soule & Reich, 2015)	**Primary modality of advertisement appeal:** Visual with Textual; Primarily Textual **Information processing and plausible influence on sustainable apparel consumption:** The highlighted phrase "don't buy this jacket" on the picture of a Patagonia jacket kindles the question "why would Patagonia ask people to not buy their own product?". Finding answer to this question would need thoughtful deliberations. The rest of the textual information on the initiatives for reducing, repairing, reusing, recycling, and reimagining apparel consumption provides a strong message

Advertisements	Analyses on Information Processing
 (Sohn, 2018)	argument supporting the phrase "don't buy this jacket". It would facilitate finding answer to the question on why Patagonia is asking to not buy the jacket. Collectively, the textual information reflects the theme of anti-consumption. As this processing requires linking various pieces of information in the advertisement and scrutinizing them for deciphering the advertisement theme, it could be implied that the information processing is likely to be done centrally. As the advertisement reflects Patagonia's self-transcendence (i.e., saving environment at the cost of potential monitory losses) it is likely to kindle evoke respect and trust toward the brand. Further, the advertisement clearly describes Patagonia's role and efforts in helping consumers toward anti-consumption. The advertisement also reflects Patagonia's role in fulfilling consumers' need for affordability and quality in apparel by offering durable products that will foster need-based buying and save money. As these reflects fulfilling consumers' concern along with protecting environment, this advertisement is likely to evoke positive intentions for sustainable apparel consumption. **Primary modality of advertisement appeal:** Visual with Textual **Information processing and plausible influence on sustainable apparel consumption:** Unlike Patagonia, which had used a commanding tone (e.g., "don't", "you pledge") for promoting anti-consumption, Reformation in this advertisement has used a milder tone of persuasion. The words "you should" and "probably" lets the consumer decide for themselves if they want to recycle apparel or not, thereby, providing a sense of power and freedom in taking apparel consumption decisions. This may evoke positive affective response toward the advertisement. However, given that the advertisement does not mention Reformation's role in helping consumers recycling their apparel or fulfilling consumers' competing concerns in apparel consumption (e.g., affordability, style), consumers may not process the advertisement further when their concerns for these competing needs are higher than their concern for

Advertisements	Analyses on Information Processing
 (Sustainable Business Models, 2016)	environment. Therefore, among these consumers with other competing needs for apparel, the processing shall be done peripherally. Such quick processing coupled with lack of relevance in the advertisement may hinder in evoking positive intentions for sustainable apparel consumption among these consumers. However, when consumers have higher concern for environment than other competing concerns for apparel, they are likely to process the advertisement further thoroughly; as such, they may centrally process how recycling could protect environment. Therefore, when the concern for environment is higher than other concerns, intentions for sustainable apparel consumption could be encouraged through central routes of persuasion through this ad. **Primary modality of advertisement appeal:** Visual with Textual **Information processing and plausible influence on sustainable apparel consumption:** In this advertisement, TenTree provides a strong message argument about their role in protecting environment. Specifically, it communicates the message through information redundancy by matching the background image word-by-word with the verbal message (i.e., ten trees are planted for every item purchased). The message implies that one single purchase is worth giving back to nature by ten times. Therefore, this advertisement is likely to evoke higher positive affective response toward this brand or its apparel among individuals who have higher concern for environment than any other competing concerns for apparel consumption (e.g., affordability, style). As these individuals with high concern for environment will find this advertisement relevant for their concern, they are likely to process the information centrally. A positive affective response coupled with thoughtful deliberations on strong pro-environmental message arguments is likely to influence their intentions for sustainable apparel consumption positively. However, consumers who have higher concerns for other competing needs for apparel consumption than environment, are unlikely to find this

Advertisements	Analyses on Information Processing
 (Yang, 2013)	advertisement relevant to their concerns. Therefore, they are likely to process the advertisement peripherally. As such, this advertisement is unlikely to evoke strong positive intentions for sustainable apparel consumption among these consumers. **Primary modality of advertisement appeal:** Visual with Textual **Information processing and plausible influence on sustainable apparel consumption:** Unlike the other advertisements discussed so far, the focus on sustainable apparel consumption in this advertisement is subtle. The background image reflects the major themes of style, self-expression, and love for nature. This processing happens automatically through peripheral routes of persuasion. The themes are supported further by the verbal cues such as, "conscious" and "sustainable fashion". Linking the verbal cues with the visual cues needs further thoughtful deliberations. For example, individuals who have high concern for environment may further deliberate on how sustainability has been achieved- as the image reflects love for nature, will that mean that the apparel were made from organic materials? Or, were the apparel only ethically made by following fare trade laws? Conversely, individuals who have high concerns for style or self-expression may ponder on- what else is there in the "collection" of "sustainable fashion" and how would that meet their personal sense of style or needs for self-expression. Therefore, consumers who have high concerns for environment, style, and self-expression may find this advertisement relevant thereby evoking positive affective response and intentions toward sustainable apparel consumption. As such, they are likely to process the advertisement information peripherally at first, followed by central processing. However, the advertisement does not provide information on the affordability of these apparel. Therefore, individuals who have high concern for affordability in apparel consumption are likely to process the advertisement only peripherally. As they are unlikely to find the advertisement relevant to their concern for affordability, they may not evoke

Advertisements	Analyses on Information Processing
 (Thomas, 2017)	positive intentions for sustainable apparel consumption. **Primary modality of advertisement appeal:** Visual with Textual **Information processing and plausible influence on sustainable apparel consumption:** Unlike other advertisements discussed so far, this advertisement merges consumers' concern for affordability and environment. Specifically, individuals who have high concern for environment would centrally process the verbal and visual information to decipher that repairing jeans would preclude the need for buying frequently, thereby reducing consumption and protecting environment. Further, consumers who have high concern for affordability in apparel consumption would centrally process the verbal information to understand the opportunity of saving money through free repairs of jeans. Therefore, this advertisement is likely to evoke positive affective response toward and intentions for sustainable apparel consumption among these consumers. However, consumers who have high concern for style in apparel consumption may find it difficult to understand how a pair of repaired and old jeans could help them stay in style. Therefore, this advertisement may not evoke positive affective response toward and intentions for sustainable apparel consumption among these consumers.
 (Vetta, 2019)	**Primary modality of advertisement appeal:** Visual with Textual **Information processing and plausible influence on sustainable apparel consumption:** Unlike the other advertisements discussed so far, this advertisement by Vetta focusses on consumers' concern for style and self-expression, with indirect cues for the concern for affordability and environment. For example, the verbal message reflects how consumers can stay in style and engage in self-expression by mixing and matching five clothing items to achieve thirty different outfits. Therefore, this should evoke positive affective response toward the capsule of apparel collection. However, the advertisement does not provide visual examples on how five items can

Advertisements	Analyses on Information Processing
	create thirty different outfits. Therefore, while the visual cue is likely to be processed peripherally, the verbal cue should be processed centrally. Further, individuals who have high concern for affordability could centrally process the verbal information to evaluate how they can save money by investing on only five items and getting a return equivalent to thirty outfits. Individuals having high concern for environment should centrally process the verbal information to evaluate how these items could substantially reduce consumption and save environment. However, as the verbal information does not say if the items are made from organic material and the visual cue does not reflect environmental concern, individuals with high concern for environment may not immediately form purchase intentions from this brand. Therefore, even though, consumers with high concerns for style, self-expression, and affordability should evoke positive affective response toward and intentions for sustainable apparel consumers, consumers with high concern for environment could be skeptic in their immediate purchase intentions from this brand.

Appendix B: Summary of Measurement Scales for the Research Variables in Study 1

Table 20

Items for Measuring Purchase Intentions for Sustainable Apparel

Original Scale Items	Adapted Scale Items	Original Scale Information
1. I want to buy this jacket because it reduces my impact on environment. 2. Instead of paying for 2-3 jackets, I want to buy the one in the ad and wear it for a long time. 3. I will likely buy this jacket in the future. 4. I will definitely buy this jacket.	1. I want to buy a sustainable apparel because it reduces my impact on environment. 2. Instead of paying for 2-3 apparel, I would like to buy one sustainable apparel as shown in the advertisement and wear it for a long time. 3. Instead of paying for 2-3 apparel, I would like to buy one sustainable apparel as shown in the advertisement and wear it in different styles. 4. I will likely buy a sustainable apparel in the future. 5. I will definitely buy a sustainable apparel.	Source: (Hwang et al., 2016). Reliability: Construct reliability (.81) Scale type: 5 item, 7-point Likert scale (1=strongly disagree; 7=strongly agree)

Table 21

Items for Measuring Affective response toward Sustainable Apparel

Adopted Scale Items	Scale Information
	Source: Affective responses scale (Batra & Holbrook, 1990).
Bored	Scale type: 7-point scale
1. Bored	
2. Unimpressed	Composite construct reliability: .92
Desire	Composite construct reliability: .90
3. Desirous	
4. Full of craving	

Note. Bored and desire are the affect types. Adjectives under each affect type (e.g., bored, unimpressed, desirous, full of craving) form the scale items, administered as "I felt not at all (adjective)/very (adjective)" (Batra & Holbrook, 1990, p. 22). In the present study, the items were administered as "I felt very (adjective) about sustainable apparel." The ratings were taken in a 7-point Likert scale (1=strongly disagree, 7=strongly agree).

Table 22

Items for Measuring Central Processing

Original Scale Items	Adapted Scale Items	Original Scale Information
1. Attempting to analyze the issues in the message. 2. Deep in thought about the message. 3. Extending a good deal of cognitive effort. 4. Not really exerting your mind.* 5. Doing your best to think about what was written. 6. Reflecting on the implications of the arguments. 7. Searching your mind in response to the ideas.	1. I am attempting to analyze the issue in the advertisement message. 2. I am deep in thought about the message presented in the advertisement. 3. I am extending a good deal of thinking about the advertisement message. 4. I am really exerting my mind about the advertisement message. 5. I am doing my best to think about the advertisement message. 6. I am reflecting on the implications of the arguments made in the advertisement message. 7. I am searching my mind in response to the ideas presented in the advertisement.	Source: Elaboration measure scale (Reynolds, 1997). Reliability: Cronbach's alpha (.94) Scale type: 12 item, 7-point Likert scale (1=strongly disagree; 7=strongly agree)

Note. Items marked with * indicates reverse coding.

Table 23

Items for Measuring Peripheral Processing

Original Scale Items	Adapted Scale Items	Original Scale Information
1. How important is an attractive overall compensation package to you when considering potential employers?	1. Overall attractiveness of this advertisement is very important for me while I am evaluating it. 2. I am evaluating the advertisement largely on the basis of its attractiveness.	Source: Employer attractiveness scale (Berthon et al., 2005). Reliability: Cronbach's alpha (.96) Scale type: 25-item, 7-point

Original Scale Items	Adapted Scale Items	Original Scale Information
		Likert scale (1=strongly disagree; 7=strongly agree)
2. Using a fair fashion brand/product expresses my self-image very well. 3. The taste of a fair fashion brand/product is consistent with my taste. 4. The mood of a fair fashion brand/product matches well with my mood.	3. I am effortlessly trying to relate how the advertisement matches with my own self-image. 4. I am effortlessly trying to relate how the advertisement matches with my taste for apparel. 5. I am effortlessly trying to relate how the advertisement matches with my mood.	Source: Self-congruity scale (Lee & Lee, 2015). Reliability: Composite reliability (.90), Cronbach's alpha (.90) Scale type: 3-item, 7-point Likert scale (1=strongly disagree; 7=strongly agree)
6. This outfit is consistent with how I see myself at work. 7. This outfit reflects who I am at work. 8. This outfit is a mirror image of me.	6. I am effortlessly trying to relate how the advertisement matches with the way I see myself. 7.I am effortlessly trying to relate how the advertisement matches with who I am. 8.I am effortlessly trying to relate how the advertisement can mirror my image.	Source: Self-image congruence scale (Sirgy et al., 1997); Reliability: Cronbach's alpha (.90); Scale type: 5-item, unidimensional, 7-point Likert scale (1=strongly disagree; 7=strongly agree)

Table 24

Items for Measuring Involvement with Environmental Issues

Original Scale Items	Adapted Scale Items	Original Scale Information
1. I feel a personal obligation to do whatever I can to prevent climate change. 2. I feel a sense of personal obligation to take action to stop the disposal of toxic substances in the air, water, and soil. 3. People like me should do whatever we can to prevent the loss of tropical forests.	1. I feel a personal obligation to do whatever I can to prevent climate change. 2. I feel a sense of personal obligation to take action to stop the disposal of toxic substances in the air, water, and soil. 3. People like me should do whatever we can to prevent the loss of tropical forests.	Source: Social Norms Individual Responsibility Scale (Kim et al., 2016). Reliability: Cronbach's alpha (.89); Composite reliability, .83 Scale type: 7-point Likert scale (1=strongly disagree; 7=strongly agree)
4. Climate change will be a very serious problem for me and my family.	4. Climate change will be a very serious problem for me and my family.	Source: Pro-environmental beliefs scale (Kim et al., 2016). Reliability: Cronbach's alpha (.93); Composite reliability, .89 Scale type: 8 item, 7-point Likert scale (1=strongly disagree; 7=strongly agree)
5. I am very concerned about the environment. 6. I would be willing to reduce my consumption to help protect the environment. 7. Protecting the natural environment	5. I am very concerned about the environment. 6. I would be willing to reduce my consumption to help protect the environment. 7. Protecting the natural environment increases my quality of life.	Source: Environmental concern Scale (D'Souza et al., 2015). Reliability: Composite reliability, .81 Scale type: 3-item, 7-point Likert scale

Original Scale Items	Adapted Scale Items	Original Scale Information
increases my quality of life.		(1=strongly disagree; 7=strongly agree)
8. I would avoid buying clothing items if it had potentially harmful environmental effects.	8. I would avoid buying clothing items if it had potentially harmful environmental effects.	Source: Sustainable commitment Scale (D'Souza, et al., 2015).
9. Supporting environmental protection makes me more committed to the environment.	9. Supporting environmental protection makes me more committed to the environment.	Reliability: Composite reliability, .82 Scale type: 3-item, 7-point Likert scale (1=strongly disagree; 7=strongly agree)

Note. All item measuring involvement with environmental issues will be measured by a 7-point Likert scale.

Appendix C: Summary of Measurement Scales for the Research Variables in Study 2

Table 25

Items for Measuring Motive Compliance toward a Goal for Affordability

Original scale items	Revised scale items	Original scale information
Perceived benefits 1. Eating a low-salt diet keeps me healthy. 2. When I follow my low-salt diet, I feel better. 3. Eating a low-salt diet reduces the feeling of thirst. 4. Eating a low-salt diet helps me breathe more comfortably. 5. Eating a low-salt diet keeps my heart healthy. 6. Salty food is not good for me. 7. Eating a low-salt diet helps keep my blood pressure down. Perceived barriers 8. Following a low-salt diet is hard to do when I go out to eat. 9. Food does not taste good on a low-salt diet. 10. Following a low-salt diet takes too much time. 11. Following low-salt diet is very expensive. 12. It is difficult to understand how to follow a low-salt diet.	Perceived benefits 1. N/A. Item deleted 2. If I had to buy sustainable apparel, I would feel better if I could comply to my motive of buying affordably. 3. If I had to buy sustainable apparel, I would feel better if I could buy affordable sustainable apparel. 4. N/A. Item deleted. 5. N/A. Item deleted. 6. If I had to buy sustainable apparel, I would consider buying sustainable apparel that are pocket friendly. 7. N/A. Item deleted. Perceived barriers 8. Complying to my motive of buying affordably might be hard if I have to buy sustainable apparel. 9. N/A. Item deleted. 10. N/A. Item deleted. 11. Shopping for sustainable apparel could be very expensive. 12. It will be difficult to comply to my motive of following a budget if	Source: Turkish version of the Beliefs about Dietary Compliance Scale (BDCS-T; Kara, 2014). Reliability: Cronbach's alpha =.9; The scale was developed with two factors- perceived benefits (Cronbach's alpha =.91) and perceived barriers (Cronbach's alpha =.66). Scale type: 2-item 5-point Likert scale (1=strongly disagree, 5=strongly agree);

	I have to buy sustainable apparel.	

Table 26

Items for Measuring Intrinsic Pleasantness of Sustainable Apparel

Original scale items	Revised scale items	Original Scale Information
1. Rate the pleasantness of odor.	1. How pleasant do you find the idea of inspiring people for protecting the planet by buying environmentally friendly and ethically made apparel? 2. How pleasant do you find the idea of sharing your stories of sustainable apparel consumption to inspire others for sustainable apparel consumption? 3. How pleasant do you find the idea of sharing your stories of using sustainable apparel to inspire others for using sustainable apparel? 4. How pleasant do you find the idea of sharing your stories of wearing sustainable apparel to inspire others for wearing sustainable apparel? 5. How pleasant do you find the idea of sharing your stories of buying sustainable apparel to inspire others for	Source: Pleasantness of odor (Knaapila et al., 2008) Scale type: 9-point Likert scale (1=extremely unpleasant; 9=extremely pleasant)

Original scale items	Revised scale items	Original Scale Information
	buying sustainable apparel? 6. How pleasant do you find the idea of sharing your stories of using environmentally friendly and ethically made apparel to inspire others for using environmentally friendly and ethically made apparel? 7. How pleasant do you find the idea of sharing your stories of wearing environmentally friendly and ethically made apparel to inspire others for wearing environmentally friendly and ethically made apparel? 8. How pleasant do you find the idea of sharing your stories of buying environmentally friendly and ethically made apparel to inspire others for buying environmentally friendly and ethically made apparel?	

Table 27

Items for Measuring Legitimacy for Protecting Environment through Sustainable Apparel

Original scale items	Revised scale items	Original Scale Information
1. I have confidence in the police. 2. People should always follow the directions of police officers even if they go against what they think is right. 3. Police do their job well. 4. I have great respect for the police.	1. I have confidence in protecting environment through sustainable apparel consumption. 2. I have confidence in protecting environment by wearing environmentally friendly apparel. 3. have confidence in protecting environment by using environmentally friendly apparel. 4. I have confidence in protecting environment by buying environmentally friendly apparel. 5. I have much respect for people who wear environmentally friendly apparel. 6. I have much respect for people who buy environmentally friendly apparel. 7. Environmentally friendly apparel does its job well in protecting environment.	Source: Police legitimacy (Hinds & Murphy, 2007) Scale type: 4 item, 5-point Likert scale (1=strongly disagree; 5=strongly agree)

Table 28

Expressions for Measuring Emotional Responses

Original emotions	Adapted emotions	Original Scale Information
1.  Satisfaction 2.  Admiration 3.  Desire	1.  Satisfaction 2.  Contended 3.  Admiration 4.  Impressed 5.  Desire 6. Yearning 	Source: PrEmo, a non-textual self-report instrument to measure emotional responses (Desmet et al., 2007, p.145). The emotions are measured by a 3-point scale with the ratings "I do feel the emotion expressed by the character", "to some extent I feel the emotion expressed by the character", and "I do not feel the emotion expressed by the character". In the present study, the emotions were measured in a 6-point Likert scale.

Table 29

Items for Measuring Purchase Intention for Sustainable Apparel

Original scale items	Revised scale items	Original Scale Information
1. How likely is that you would consider purchasing a CD from this website in the longer term? 2. How likely is that you would consider purchasing a CD from this website in the short term? 3. How likely is that you would return to this store's website?	1. How likely is that you would consider purchasing a sustainable apparel in the longer term? 2. How likely is that you would visit a store for sustainable apparel? 3. How likely is that you would definitely buy sustainable apparel in the future? 4. How likely is that you would probably buy sustainable apparel in the future?	Source: Online purchase intention scale (Verhagen & Dolen, 2009). Reliability: Cronbach's alpha=.78 Scale type: 3-item 7-point Likert type (1=very unlikely; 7=very likely)

Appendix D: Summary of Measurement Scales for Control Variables (Study 1 and 2)

Table 30

Items for Measuring Fashion Innovativeness

Original Scale Items	Original Scale Information
1. Compared to my friends, I own very new fashion clothes. 2. I know the names of new fashion designers before other people do. 3. If I heard that new fashion clothes were available in store, I would be interested enough to buy it. 4. I will buy new fashion clothes even if I have not seen it before.	Source: Fashion innovativeness scale (Matthews & Rothenberg, 2017). Reliability: Cronbach's alpha (.76) Scale type: 6-item, 5-point Likert scale (1=strongly disagree; 5=strongly agree)
5. Fashionable, attractive clothing is very important to me. 6. Keeping up with the latest fashion is important to me. 7. I spend considerable time and effort to learn about the latest fashion. 8. I keep my wardrobe up to date with the changing fashions. 9. I usually have one or more outfits of the very new fashion. 10. I consciously choose something that reflects the current fashion.	Source: Fashion orientation scale (Gupta et al., 2019). Reliability: Composite reliability (.93) Scale type: 6-item, 5-point Likert scale (1=strongly disagree; 5=strongly agree)

Note. In line with the other measured variables in the study, fashion innovativeness for apparel will be measured in a 7-point Likert scale (1=strongly disagree, 7=strongly agree).

Table 31

Items for Measuring Affordability for Apparel

Original Scale Items	Adapted Scale Items	Original Scale Information
1. I do not buy many fruits because they cost too much.	1. I do not buy apparel when they cost too much. 2. I will not buy apparel if they cost too much.	Source: Perceived fruit and vegetable affordability scale (Williams et al., 2012).

Original Scale Items	Adapted Scale Items	Original Scale Information
2. I do not buy many vegetables because they cost too much.	3. I will probably not buy apparel if they cost too much. 4. I will definitely not buy apparel if they cost too much.	Scale type: 2-item, 5-point Likert scale (1=strongly disagree; 5=strongly agree)

Note. In line with the other measured variables in the study, affordability for apparel will be measured in a 7-point Likert scale (1=strongly disagree, 7=strongly agree).

Table 32

Items for Need for Cognition

Original Scale Items	Original Scale Information
1. I would prefer complex to simple problems. 2. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	Source: Need for cognition scale scale (Ho & Bodoff, 2014). Reliability: Construct reliability (.92) Scale type: 6-item, 9-point Likert scale (1=strongly disagree; 9=strongly agree)

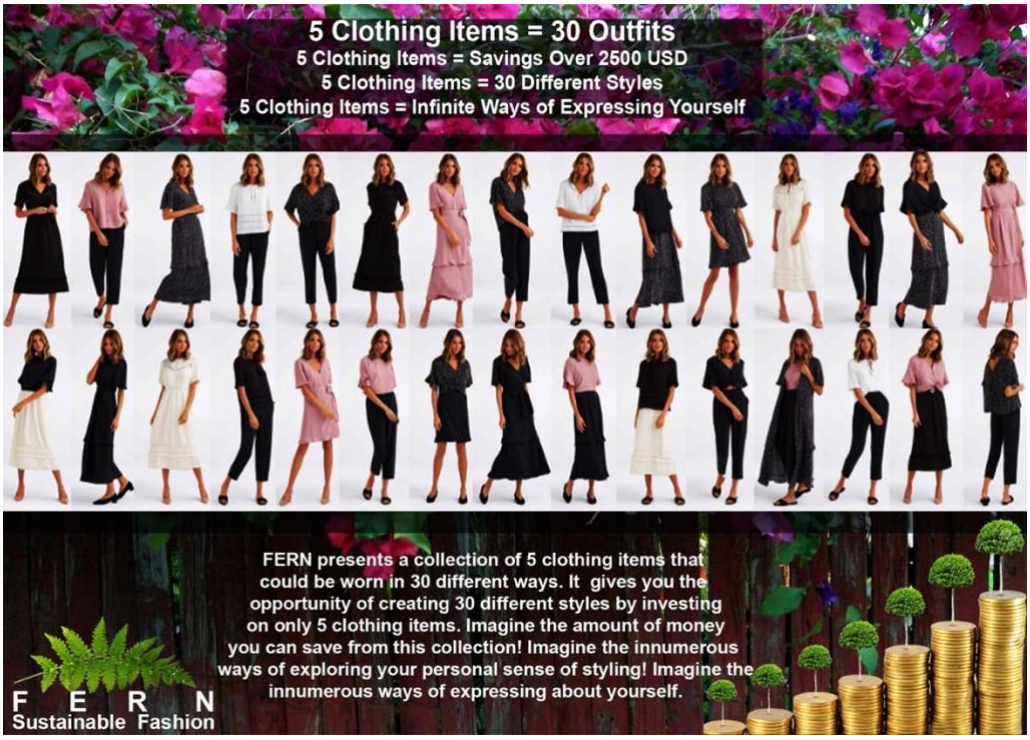
Note. In line with the other measured variables in the study, need for cognition will be measured in a 7-point Likert scale (1=strongly disagree, 7=strongly agree).

Appendix E: Experiment Stimuli for Study 1

Advertisement Modality: Visual

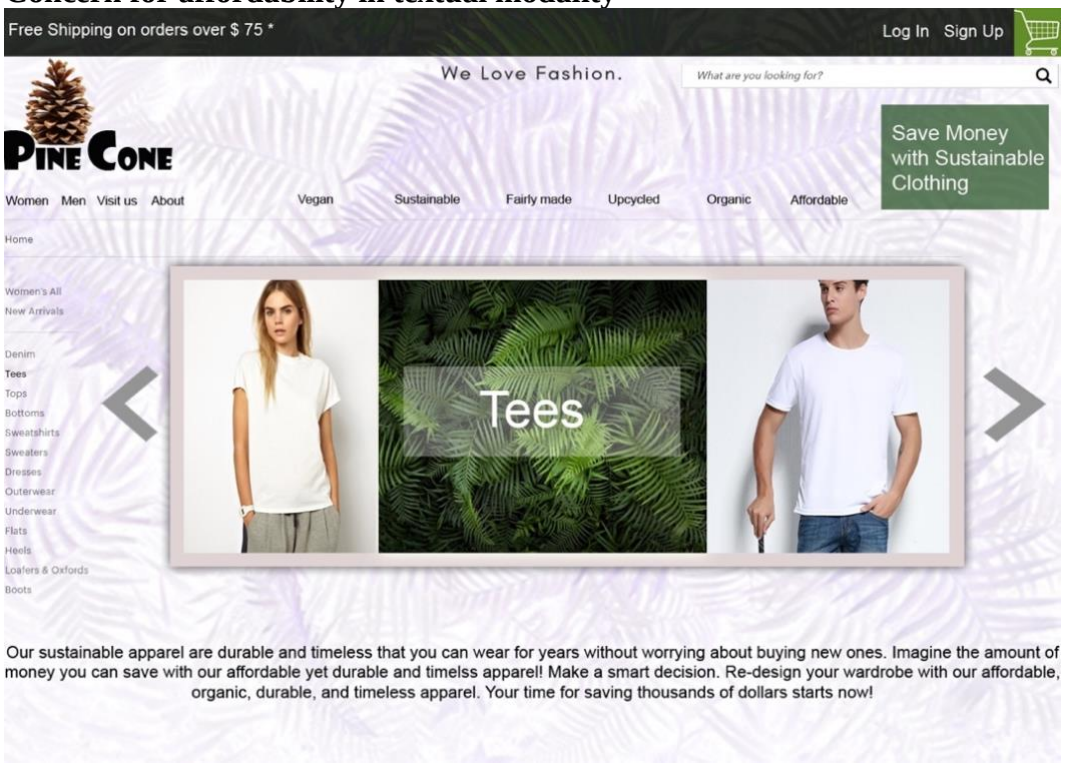
Advertisement Modality: Textual

Advertisement Modality: Textual with Visual

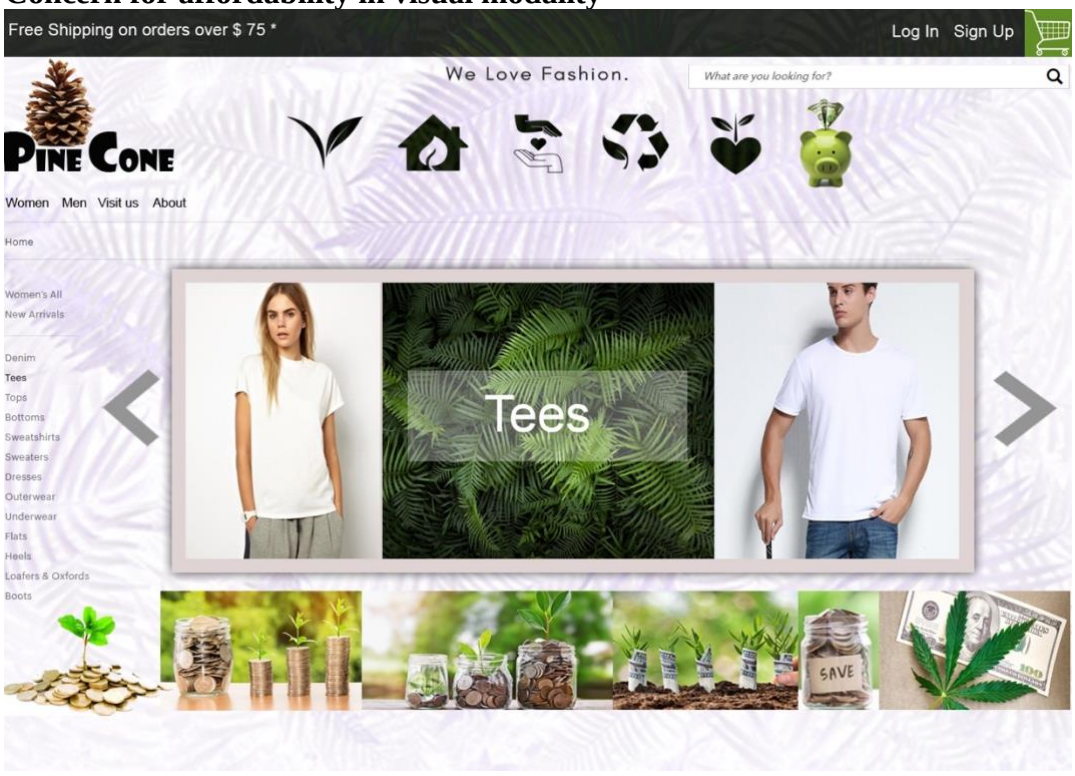


Appendix F: Preliminary stimuli for Study 2

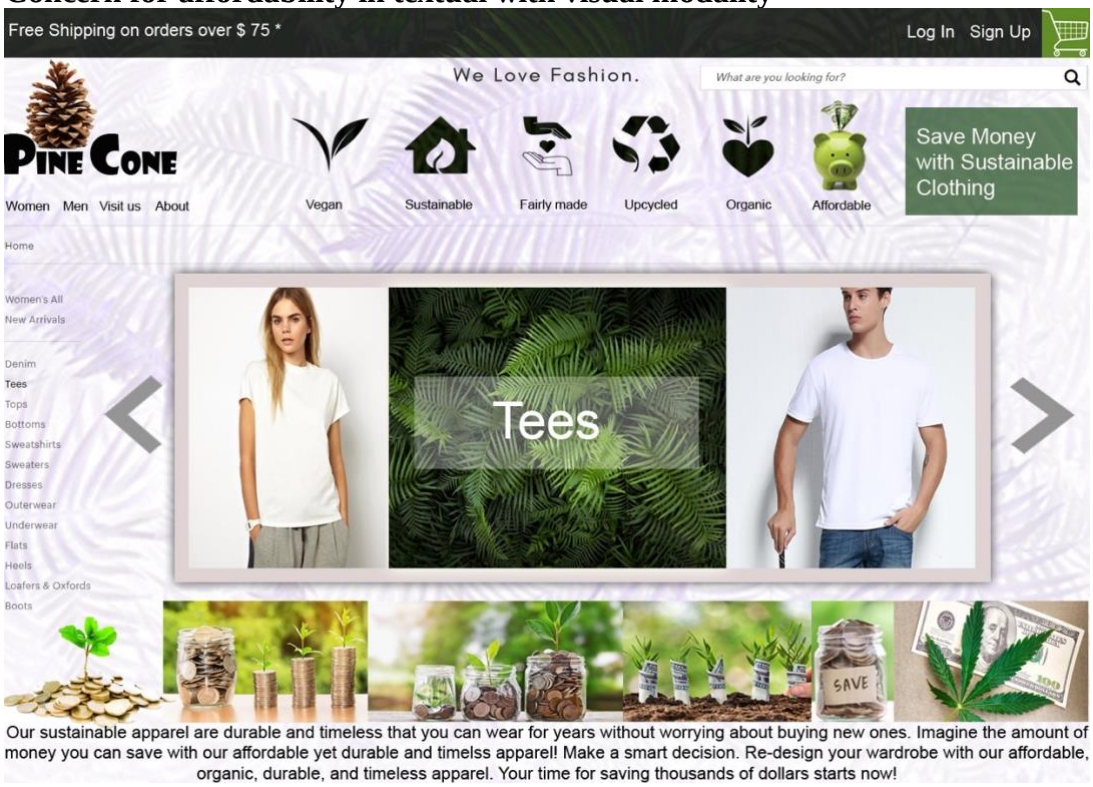
Concern for affordability in textual modality



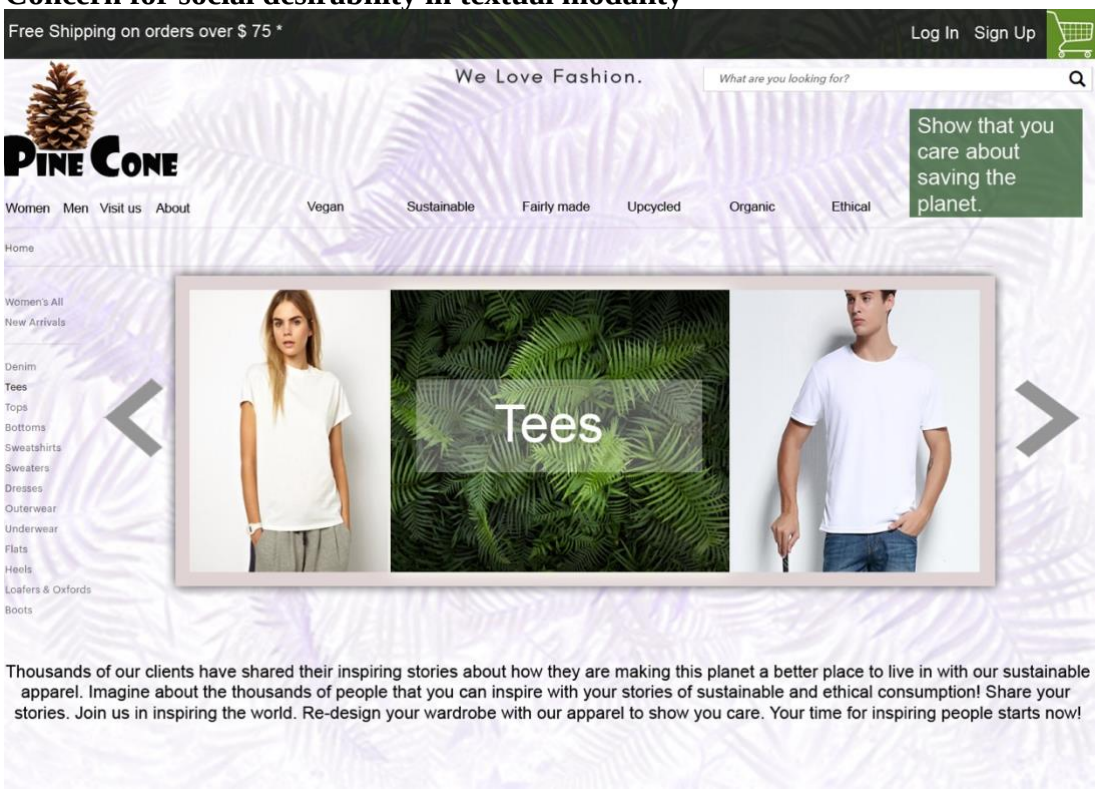
Concern for affordability in visual modality



Concern for affordability in textual with visual modality



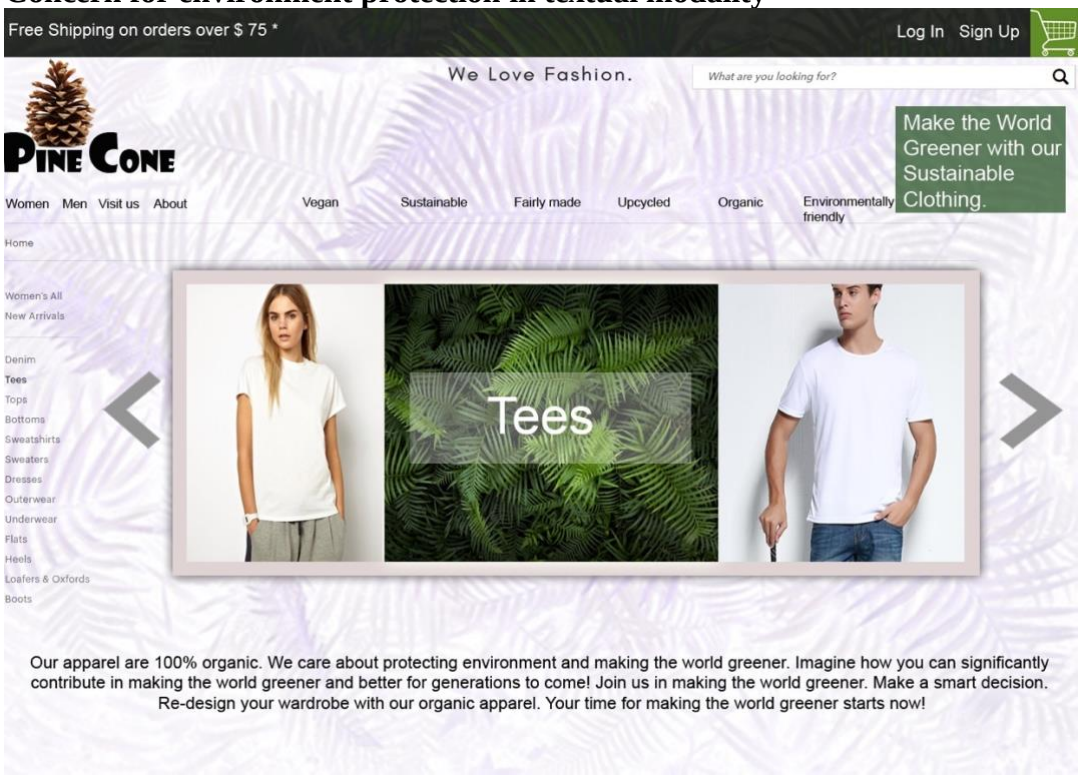
Concern for social desirability in textual modality



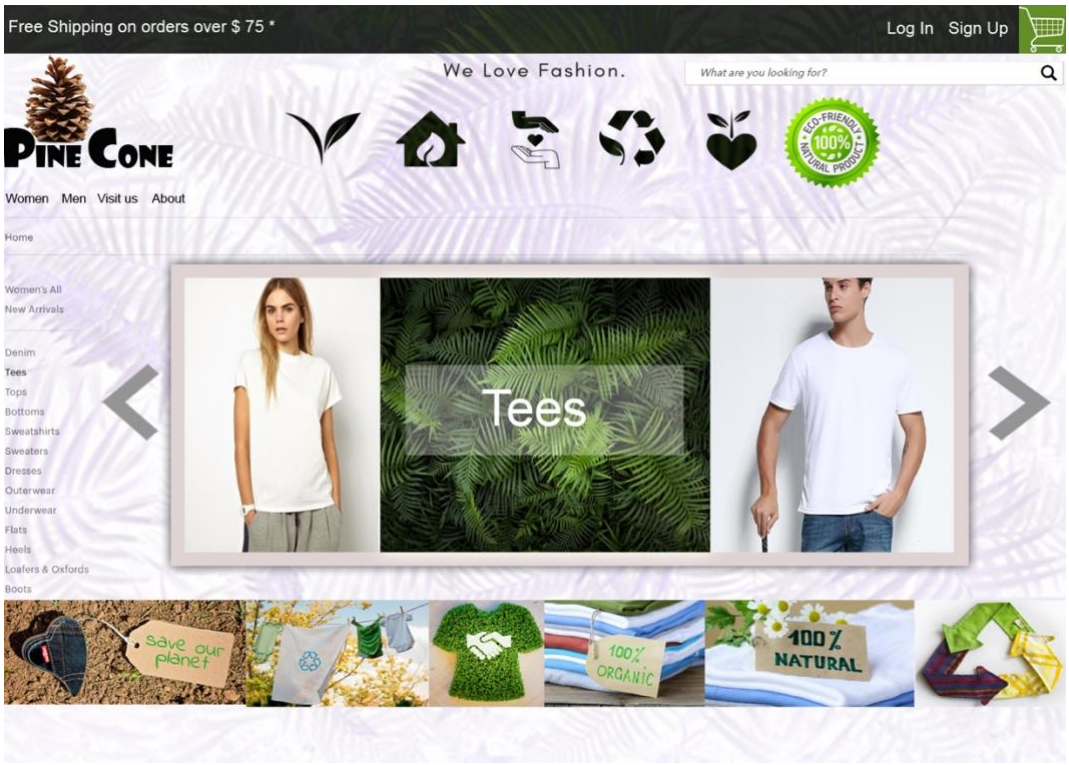
Concern for social desirability in visual modality

Concern for social desirability in textual with visual modality

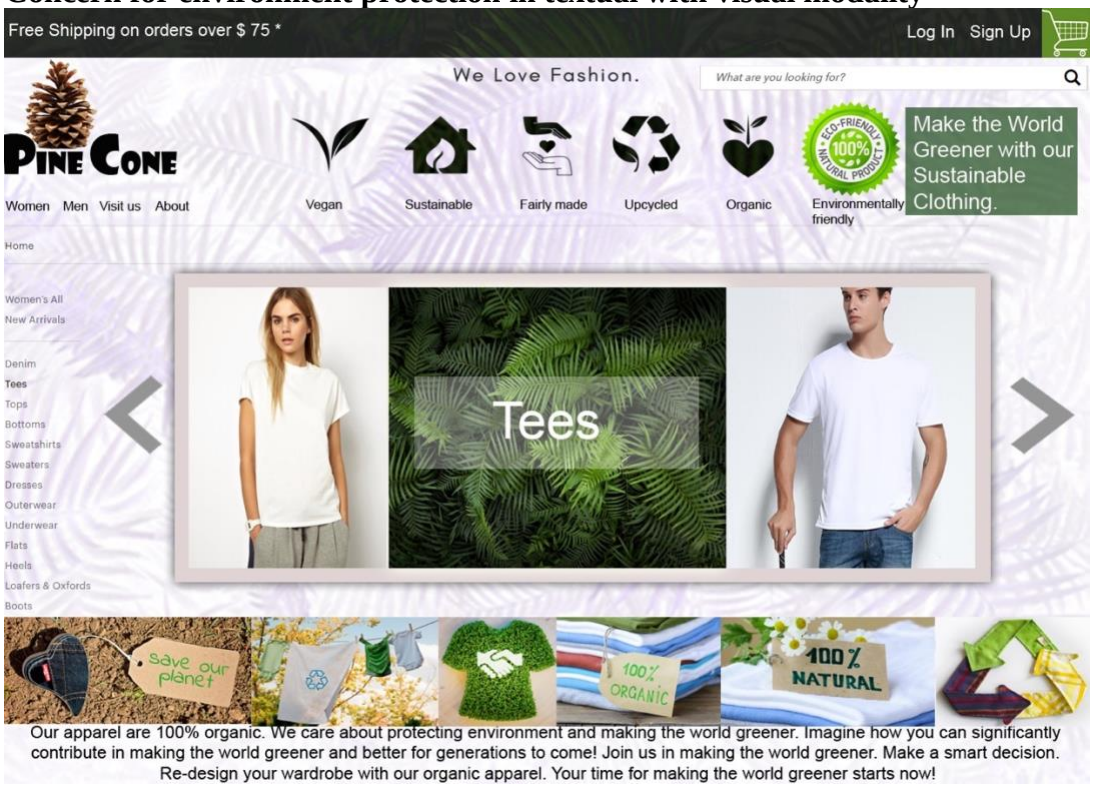
Concern for environment protection in textual modality



Concern for environment protection in visual modality



Concern for environment protection in textual with visual modality



Appendix G: Final stimuli for Study 2

Concern for affordability in textual modality

PineCone

We believe that one should not sacrifice their need for buying affordably while protecting environment. We understand that it is equally important to follow one's budget for buying apparel. Join us in buying apparel that is pocket friendly and yet environmentally friendly. Together, let us change the notion that sustainable apparel is expensive.

Concern for affordability in textual with visual modality

Concern for social desirability in textual modality

Concern for social desirability in textual with visual modality

Concern for protecting environment in textual modality

PineCone

We believe that it is our responsibility to protect the environment. All our apparel are made out of environmentally friendly materials. Join us in protecting the environment by buying environmentally friendly apparel.

Concern for protecting environment in textual with visual modality

Appendix H:

Questionnaire for Pre-Test 1

DIRECTION: The researchers want to know your opinion about a newly formed sustainable apparel brand, named Fern. Closely observe the advertisement as you will be asked questions based upon your observation.

Click on the right arrow to see the advertisement.

*One of the 3 advertisements *

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your opinion on how the advertisement is conveying its message.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I think that the advertisement message is primarily conveyed through visuals.	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through textual information.	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through both visual and textual information.	1	2	3	4	5	6	7

DIRECTION: The following section is to understand your overall attitude for a new apparel brand named PineCone. You will be shown a picture of PineCone's website. Closely observe the picture as you will be asked questions based upon your observation.

Click on the right arrow to see the first picture.

One of the advertisement appeal concern in one of the three modalities

DIRECTION: Please indicate your level of agreement with the following statements related to **the picture of the webpage that you have just seen.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***

This webpage strongly reflects a concern for affordable sustainable consumption.	1	2	3	4	5	6	7
This webpage strongly reflects a concern for projecting oneself as ethical and responsible through sustainable apparel consumption.	1	2	3	4	5	6	7
This webpage strongly reflects a concern for protecting environment through sustainable apparel consumption.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your opinion on how the advertisement is conveying its message.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I think that the advertisement message is primarily conveyed through visuals.	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through textual information.	1	2	3	4	5	6	7

I think that the advertisement message is primarily conveyed through both visual and textual information.	1	2	3	4	5	6	7

DEMOGRAPHC INFORMATION

DIRECTION: Please answer the following questions by checking the appropriate selection, filling in the blanks, or typing your responses.

- What is your **age?** (in years)_____
- What is your **gender?**
  - Male
  - Female
  - Prefer not to say
- What is **your class standing based on your course credits**?
  - Freshmen
  - Sophomore
  - Junior
  - Senior
- What is your **annual household income?**
  - $30,000 or less
  - $30,001 to 60,000
  - $60,001 to 90,000
  - $90,001 to 120,000
  - $120,001 to 150,000
  - $150,001 or more
- What is your **ethnicity?**
  - Asian/Pacific Islander
  - Caucasian
  - African American
  - Latino/Hispanic
  - Other (Please specify)

If you wish to receive extra credits for participating in the survey, **please click on the right arrow.** After clicking the right arrow, **you will be redirected to another page asking for some information needed to give you the extra credits.** Please remember your response to the survey will not be linked to your personal information that you will share for receiving extra credits.

Thank you for participating in the survey.

Appendix I:

Questionnaire for Pre-Test 2

DIRECTION: The researchers want to know your opinion about a newly formed sustainable apparel brand, named Fern. Closely observe the advertisement as you will be asked questions based upon your observation.

Click on the right arrow to see the advertisement.

One of the 3 advertisements

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your opinion on how the advertisement is conveying its message.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I think that the advertisement message is primarily conveyed through visuals.	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through textual information.	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through both visual and textual informatio n.	1	2	3	4	5	6	7

DIRECTION: The following section is to understand your overall attitude for a new apparel brand named PineCone. You will be shown a picture of PineCone's advertisement. Closely observe the picture as you will be asked questions based upon your observation.

Click on the right arrow to see the first picture.

One of the advertisement appeal concern in one of the two modalities

DIRECTION: Please indicate your level of agreement with the following statements related to **the picture of the webpage that you have just seen.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
This webpage strongly reflects a concern for affordable sustainable consumption.	1	2	3	4	5	6	7
This webpage strongly reflects a concern for projecting oneself as ethical and responsible through sustainable apparel consumption.	1	2	3	4	5	6	7
This webpage strongly reflects a concern for protecting environment through sustainable apparel consumption.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your opinion on how the advertisement is conveying its message.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I think that the advertisement message is primarily conveyed through visuals.	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through textual information.	1	2	3	4	5	6	7

I think that the advertisement message is primarily conveyed through both visual and textual informatio n.	1	2	3	4	5	6	7

DEMOGRAPHC INFORMATION

DIRECTION: Please answer the following questions by checking the appropriate selection, filling in the blanks, or typing your responses.

- What is your **age?** (in years)_____
- What is your **gender?**
  - Male
  - Female
  - Prefer not to say
- What is **your class standing based on your course credits**?
  - Freshmen
  - Sophomore
  - Junior
  - Senior
- What is your **annual household income?**
  - $30,000 or less
  - $30,001 to 60,000
  - $60,001 to 90,000
  - $90,001 to 120,000
  - $120,001 to 150,000
  - $150,001 or more
- What is your **ethnicity?**
  - Asian/Pacific Islander
  - Caucasian
  - African American
  - Latino/Hispanic
  - Other (Please specify)

If you wish to receive extra credits for participating in the survey, **please click on the right arrow.** After clicking the right arrow, **you will be redirected to another page asking for some information needed to give you the extra credits.** Please remember your response to the survey will not be linked to your personal information that you will share for receiving extra credits.

Thank you for participating in the survey.

Appendix J:
Questionnaire for Study 1

1. Which of the following **best describes the year when you were born?**
    - before 1981
    - After 1981 but before 1996
    - After 1996 but before 2011
    - After 2011
2. What is your **gender?**
    - Male
    - Female
3. Which of the following best describes your **country of residence?**
    - The U.S.
    - Mexico
    - Canada
    - Other

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your felt personal relevance for environmental issues.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I feel a personal obligation to do whatever I can to prevent climate change.	1	2	3	4	5	6	7
I feel a sense of personal obligation to take action to stop the disposal of toxic substances in the air, water, and soil.	1	2	3	4	5	6	7
People like me should do whatever we can to prevent loss of tropical forests.	1	2	3	4	5	6	7
Climate change will be very serious problem for me and my family.	1	2	3	4	5	6	7
I am very concerned about the environment.	1	2	3	4	5	6	7
I would be willing to reduce my	1	2	3	4	5	6	7

consumption to help protect the environment.							
Protecting the natural environment increases my quality of life.	1	2	3	4	5	6	7
I would avoid buying clothing items if it had potentially harmful environmental effects.	1	2	3	4	5	6	7
Supporting environment protection makes me more committed to the environment.	1	2	3	4	5	6	7

DIRECTION [filler question; not related to hypotheses testing]**:** Please describe your past shopping venture in 2-3 lines. _____

DIRECTION: The researchers want to know your opinion about a newly formed sustainable apparel brand, named Fern. **Closely observe the advertisement as you will be asked questions based upon your observation.**

Click on the right arrow to see the advertisement.

One of the 3 advertisements

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your opinion on how the advertisement is conveying its message.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I think that the advertisement message is primarily conveyed through textual information.	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through visuals.	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through both textual	1	2	3	4	5	6	7

information and visuals.							

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding your **evaluation of sustainable apparel.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I want to buy a sustainable apparel because it reduces my impact on environment.	1	2	3	4	5	6	7
Instead of paying for 2-3 apparel, I would like to buy one sustainable apparel as shown in the advertisement and wear it for a long time.	1	2	3	4	5	6	7
Instead of paying for 2-3 apparel, I would like to buy one sustainable apparel as shown in the advertisement and wear it in different styles.	1	2	3	4	5	6	7
I will likely buy sustainable apparel in future.	1	2	3	4	5	6	7
I will definitely buy sustainable apparel.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your emotions toward sustainable apparel.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
	1	2	3	4	5	6	7
I felt very *bored.*	1	2	3	4	5	6	7
I felt very *unimpressed.*	1	2	3	4	5	6	7
I felt very *desirous.*	1	2	3	4	5	6	7

I felt very *full of craving.*	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your thoughts about the advertisement that you saw.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I am attempting to analyze the issue in the advertisement message.	1	2	3	4	5	6	7
I am deep in thought about the message presented in the advertisement.	1	2	3	4	5	6	7
I am extending a good deal of thinking about the advertisement message.	1	2	3	4	5	6	7
I am really exerting my mind about the advertisement message.	1	2	3	4	5	6	7
I am doing my best to think about the advertisement message.	1	2	3	4	5	6	7
I am reflecting on the implications of the arguments made in the advertisement message.	1	2	3	4	5	6	7
I am searching my mind in response to the ideas presented in the advertisement.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your felt importance for the attractiveness of the advertisement that you saw.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
Overall attractiveness of this advertisement is very important for me while I am evaluating it	1	2	3	4	5	6	7
I am evaluating the advertisement largely on the basis of its attractiveness.	1	2	3	4	5	6	7
I am effortlessly trying to relate how the advertisement matches with my own self-image.	1	2	3	4	5	6	7
I am effortlessly trying to relate how the advertisement matches with my taste for apparel.	1	2	3	4	5	6	7
I am effortlessly trying to relate how the advertisement matches with my mood.	1	2	3	4	5	6	7
I am effortlessly trying to relate how the advertisement matches with the way I see myself.	1	2	3	4	5	6	7
I am effortlessly trying to relate how the advertisement matches with who I am.	1	2	3	4	5	6	7
I am effortlessly trying to relate how the advertisement can mirror my image.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your felt importance for style and fashion in apparel.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
Compared to my friends, I own very new fashion clothes.	1	2	3	4	5	6	7
I know the names of new fashion designers before other people do.	1	2	3	4	5	6	7
If I heard that new fashion clothes were available in store, I would be interested enough to buy it.	1	2	3	4	5	6	7
I will buy new fashion clothes even if I have not seen it before.	1	2	3	4	5	6	7
Fashionable, attractive clothing is very important to me.	1	2	3	4	5	6	7
Keeping up with the latest fashion is important to me.	1	2	3	4	5	6	7
I spend considerable time and effort to learn about the latest fashion.	1	2	3	4	5	6	7
I keep wardrobe up to date with the changing fashions.	1	2	3	4	5	6	7
I usually have one or more outfits of the very new fashion.	1	2	3	4	5	6	7
I consciously choose something that reflects the current fashion.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your felt importance for affordability of apparel.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I do not buy apparel when they cost too much.	1	2	3	4	5	6	7
I will not buy apparel if they cost too much.	1	2	3	4	5	6	7
I will probably not buy apparel if they cost too much.	1	2	3	4	5	6	7
I will definitely not buy apparel if they cost too much.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your love for challenges in thinking.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I would prefer complex to simple problems.	1	2	3	4	5	6	7
I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	1	2	3	4	5	6	7

DEMOGRAPHC INFORMATION

DIRECTION: Please answer the following questions by checking the appropriate selection, filling in the blanks, or typing your responses.

- What is your **age?** (in years) _____
- What is **the highest level of education** you have completed?
    - 8th Grade or Less

- Some High School, no Diploma
- High School Graduate, Diploma, or the equivalent
- Technical/Vocational training
- College Degree (4 Years)
- Some Graduate School
- Graduate Degree (Master's, Doctorate, Etc.)

- What is your **annual household income?**
  - $30,000 or less
  - $31,000 to 60,000
  - $61,000 to 90,000
  - $91,000 to 120,000
  - $121,000 to 150,000
  - $151,000 or more

- What is your **employment status**?
  - Currently unemployed
  - Employed for wages
  - Self-employed
  - A Homemaker
  - A Student
  - Other (please specify)
- What is your **marital status?**
  - Single, never married
  - Married
  - Widowed
  - Divorced
  - Separated
  - Other (please specify)
- What is your **ethnicity?**
  - Asian/Pacific Islander
  - Caucasian
  - African American
  - Latino/Hispanic
  - Other (Please specify)

Thank you for your time. Your Amazon Mechanical Turk code is **SUS123.** Please click on the right arrow to submit your responses and complete the survey.

Thank you for participating in the survey.

Appendix K: Questionnaire for Study 2

1. Which of the following best describes the year when you were born?
    - before 1981
    - After 1981 but before 1996
    - After 1996 but before 2011
    - After 2011
2. Which of the following best describes your country of residence?
    - The U.S.
    - Mexico
    - Canada
    - Other

DIRECTION: The next question is asked to understand your overall attitude for a new apparel brand named PineCone. You will be shown a picture of PineCone's advertisement. **Closely observe the picture as you will be asked questions based upon your observation.**

Click on the right arrow to see the first picture.

One of the advertisement appeal concern in one of the two modalities

DIRECTION: Please indicate **your level of agreement** to the following statements related to **picture of the advertisement that you have just seen.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
More than anything else, this advertisement focusses on the need for **buying apparel affordably.**	1	2	3	4	5	6	7
More than anything else, this advertisement focusses on the need for **sharing about one's ethical buying to others.**	1	2	3	4	5	6	7
More than anything else, this advertisement focusses on the need for **protecting environment.**	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your level of agreement with the statements regarding **your opinion on how the advertisement of PineCone is conveying its message**.

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I think that the advertisement message is primarily conveyed through **visuals.**	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through **textual information.**	1	2	3	4	5	6	7
I think that the advertisement message is primarily conveyed through both **textual information and visuals.**	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate your **preference toward sustainable apparel now.**

	Very unlikely	***Unlikely***	***Slightly Unlikely***	***Neutral***	***Slightly Likely***	***Likely***	***Very Likely***
How likely is that you would consider purchasing a sustainable apparel in the longer term?	1	2	3	4	5	6	7
How likely is that you would visit a store for sustainable apparel?	1	2	3	4	5	6	7
How likely is that you would definitely buy sustainable apparel in the future?	1	2	3	4	5	6	7
How likely is that you would probably buy sustainable apparel in the future?	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate **your level of emotions toward sustainable apparel now.**

	I strongly do not feel the emotion expressed by the character	***I do not feel the emotion expressed by the character***	***To some extent, I do not feel the emotion expressed by the character***	***To some extent, I feel the emotion expressed by the character***	***I feel the emotion expressed by the character***	***I strongly feel the emotion expressed by the character***
 Satisfied	1	2	3	4	5	6
 Contented	1	2	3	4	5	6
 Admiration	1	2	3	4	5	6
 Impressed	1	2	3	4	5	6
 Desire	1	2	3	4	5	6
 Yearning	1	2	3	4	5	6

DIRECTION: Please **SELECT** an appropriate box to indicate **your level of agreement about sustainable apparel's ability to protect environment.**

	Strongly Disagree	***Disagree***	***Slightly Disagree***	***Neither Agree nor Disagree***	***Slightly Agree***	***Agree***	***Strongly Agree***
I have confidence in protecting environment through sustainable apparel consumption.	1	2	3	4	5	6	7
I have confidence in protecting environment by wearing environmentally friendly apparel.	1	2	3	4	5	6	7
I have confidence in protecting environment by using environmentally friendly apparel.	1	2	3	4	5	6	7
I have confidence in protecting environment by buying environmentally friendly apparel.	1	2	3	4	5	6	7
I have much respect for people who wear environmentally friendly apparel.	1	2	3	4	5	6	7
I have much respect for people who buy environmentally friendly apparel.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate **the degree to which you find the idea of using sustainable apparel pleasant.**

	Extremely unpleasant	***Unpleasant***	***Slightly Unpleasant***	***Neither Pleasant nor Unpleasant***	***Slightly Pleasant***	***Pleasant***	***Strongly Pleasant***
How pleasant do you find the idea of inspiring people for	1	2	3	4	5	6	7

protecting the planet by buying environmentally friendly and ethically made apparel?							
How pleasant do you find the idea of sharing your stories of sustainable apparel consumption to inspire others for sustainable apparel consumption?	1	2	3	4	5	6	7
How pleasant do you find the idea of sharing your stories of using sustainable apparel to inspire others for using sustainable apparel?	1	2	3	4	5	6	7
How pleasant do you find the idea of sharing your stories of wearing sustainable apparel to inspire others for wearing sustainable apparel?	1	2	3	4	5	6	7
How pleasant do you find the idea of sharing your stories of buying sustainable apparel to inspire others for buying sustainable apparel?	1	2	3	4	5	6	7
How pleasant do you find the idea of sharing your stories of using environmentally friendly and ethically made apparel to inspire others for using environmentally friendly and ethically made apparel?	1	2	3	4	5	6	7
How pleasant do you find the idea of sharing your stories of wearing environmentally	1	2	3	4	5	6	7

friendly and ethically made apparel to inspire others for wearing environmentally friendly and ethically made apparel?							
How pleasant do you find the idea of sharing your stories of buying environmentally friendly and ethically made apparel to inspire others for buying environmentally friendly and ethically made apparel?	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate **your level of agreement on the following statements about affordable sustainable apparel consumption.**

	Strongly Disagree	***Disagree***	***Slightly Disagree***	***Neither Agree nor Disagree***	***Slightly Agree***	***Agree***	***Strongly Agree***
If I had to buy sustainable apparel, I would feel better if I could comply to my motive of buying affordably.	1	2	3	4	5	6	7
If I had to buy sustainable apparel, I would feel better if I could buy affordable sustainable apparel.	1	2	3	4	5	6	7
If I had to buy sustainable apparel, I would consider buying sustainable apparel that are pocket friendly.	1	2	3	4	5	6	7
Complying to my motive of buying	1	2	3	4	5	6	7

affordably might be hard if I have to buy sustainable apparel.							
Shopping for sustainable apparel could be very expensive.	1	2	3	4	5	6	7
It will be difficult to comply to my motive of following a budget if I have to buy sustainable apparel.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate **your level of agreement with the statements regarding your felt importance for style and fashion in apparel.**

	Strongly Disagree	***Disagree***	***Slightly Disagree***	***Neither Agree nor Disagree***	***Slightly Agree***	***Agree***	***Strongly Agree***
Compared to my friends, I own very new fashion clothes.	1	2	3	4	5	6	7
I know the names of new fashion designers before other people do.	1	2	3	4	5	6	7
If I heard that new fashion clothes were available in store, I would be interested enough to buy it.	1	2	3	4	5	6	7
I will buy new fashion clothes even if I have not seen it before.	1	2	3	4	5	6	7
Fashionable, attractive clothing is very important to me.	1	2	3	4	5	6	7
Keeping up with the latest fashion is important to me.	1	2	3	4	5	6	7
I spend considerable time and effort to	1	2	3	4	5	6	7

learn about the latest fashion.							
I keep wardrobe up to date with the changing fashions.	1	2	3	4	5	6	7
I usually have one or more outfits of the very new fashion.	1	2	3	4	5	6	7
I consciously choose something that reflects the current fashion.	1	2	3	4	5	6	7

DIRECTION: Please **SELECT** an appropriate box to indicate **your level of agreement with the statements regarding your love for challenges in thinking.**

	Strongly Disagree	***Slightly Disagree***	***Disagree***	***Neutral***	***Agree***	***Slightly Agree***	***Strongly Agree***
I would prefer complex to simple problems.	1	2	3	4	5	6	7
I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	1	2	3	4	5	6	7

DEMOGRAPHC INFORMATION

DIRECTION: Please answer the following questions by checking the appropriate selection, filling in the blanks, or typing your responses.

1. What is your **age?** (in years) _____
2. What is your **gender?**
    - Male
    - Female
    - Prefer not to say
3. What is **the highest level of education** you have completed?

    - 8th Grade or Less
    - Some High School, no Diploma
    - High School Graduate, Diploma, or the equivalent
    - Technical/Vocational training
    - College Degree (4 Years)

- Some Graduate School
- Graduate Degree (Master's, Doctorate, Etc.)

4. What is your **annual household income?**
    - $30,000 or less
    - $31,000 to 60,000
    - $61,000 to 90,000
    - $91,000 to 120,000
    - $121,000 to 150,000
    - $151,000 or more

5. What is your **employment status**?
    - Currently unemployed
    - Employed for wages
    - Self-employed
    - A Homemaker
    - A Student
    - Other (please specify)
6. What is your **marital status?**
    - Single, never married
    - Married
    - Widowed
    - Divorced
    - Separated
    - Other (please specify)
7. What is your **ethnicity?**
    - Asian/Pacific Islander
    - Caucasian
    - African American
    - Latino/Hispanic
    - Other (Please specify)

Thank you for participating in the survey. **Your Amazon Mechanical Turk code is STDY21.** Please mention this code while submitting your response to receive participation compensation.

Thank you for participating in the survey.