COMMUNICATING SUSTAINABILITY IN MARKETING ADVERTISEMENTS

THE INFLUENCE OF VISUALISATION AND ADVERTISEMENT CLAIMS ON INSTAGRAM ADVERTISEMENTS OF SUSTAINABLE CLOTHING BRANDS

> Pien van Dalen S1994824

Communication Science Univeristy of Twente

Supervisor drs. M.H. Tempelman

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Abstract

As sustainability has increasingly become a popular topic in today's society, the relatively new concept of sustainable marketing has emerged. Sustainable marketing has a focus on the quality of the environment and social welfare, as well as the promotion of environmental friendly products. When sustainable marketing is practiced correctly, this can bring competitive advantages for the organization. Therefore, organizations nowadays tend to include sustainability in their marketing strategies both offline as well as online. Nevertheless, it appears as if little research has been conducted regarding the influence of online sustainable marketing advertisements.

Therefore, the aim of this research is to examine how advertisement visualisation and advertisement claims influence attitude towards the brand, purchase intention, perceived sustainability, trust towards the brand, online engagement, and lastly greenwashing of an online sustainable marketing advertisements of a clothing brand.

A 2 x 2 (visualisation: *natural visualisation & raw material visualisation* x advertisement claim: *gain claim & loss claim*) experimental design was used in order to research how visualisation and advertisement claims influence online sustainable marketing advertisements. Data of 123 respondents aged between 18 and 64 was used for the analysis of the results. It was tested whether natural visualisation more positively influenced online sustainable marketing advertisements of clothing brands compared to the use of raw material visualisation. In addition, it was also tested whether the gain claim more positively influenced the online sustainable marketing advertisement compared to the use of a loss claim. Moreover, it was tested whether an interaction effect exists between visualisation and advertisement claims. Lastly, it was tested whether the use of visualisation and advertisement claims influenced perceived greenwashing towards the clothing industry in general.

Results showed no significant main effect of visualisation, advertisement claim and the interaction effect on online sustainable marketing advertisements of a clothing brand. Nevertheless, there is a positive effect present between visualisation and perceived sustainability, as the use of raw material visualisation in the online sustainable marketing advertisement of a clothing brand positively influenced perceived sustainability. Moreover, a significant effect was found for the greenwashing effect, as the respondents in general perceived the clothing industry to be less misleading after having viewed the advertisement. However, as there was no significant effect of visualisation and advertisement claim on greenwashing, it cannot be concluded that these elements caused this reduction.

This study provides more insights in the research available regarding the influence of visualisation and advertisement claims towards online sustainable marketing advertisements. Moreover, new knowledge regarding the use of raw material visualisations in sustainable marketing advertisements to increase perceived sustainability can aid marketeers in the development of new advertisements. Nevertheless, there is still a need for more research regarding this topic, as well as further investigating the findings regarding the reduction of greenwashing.

Introduction

In today's society, sustainability is a theme that is present in almost everyone's mind. It is perceived as extremely important to the world, whereas years ago sustainability was not as top of mind, let alone viewed as important. This shows the immense transformation regarding the perception of sustainability that has advanced over the last couple of years. In day-to-day life, this has translated in organizations that incorporate sustainability into their business strategy. Consumers' interest in environmentally friendly products is increasing (Brønn and Vrioni, 2001). Research from Unilever (2017) suggests that sustainable brands are preferred by one third of consumers. Moreover, research from Research Insights suggests that six out of ten consumers indicated they are willing to change their shopping behaviour for more environmentally friendly products (Haller, Lee & Cheung, 2020). Consequently, marketing advertisements communicating sustainable aspects of the organization become more visible (Rudawska, 2018). Nevertheless, it appears there are still questions concerning the effects of incorporating sustainable aspects in marketing advertisements.

Sustainability is a broad concept and, therefore, is known for its many different definitions. One of the most generally accepted definitions, as put out by the World Commission on Environment and Development, views sustainable development as a path that *'meets the needs in the present without compromising the ability of future generations to meet their own needs''* (Mullins, 2002, p. 1). Everywhere one looks, whether it is on social media, in the news, or in both online and offline advertisements and so on, sustainability has been an increasing theme throughout the years. It has become apparent that the increasing popularity regarding sustainability has influenced and changed the interest of consumers. According to Brønn and Vrioni (2001), the attention of consumers has shifted towards products and organizations, with a growing focus now fixating on sustainability.

As the topic of sustainability has transitioned to a theme that is top of mind for consumers, it consequently changes the strategy within organizations as well. According to Líšková et al. (2016), consumer interest in sustainability and natural resources goes back to the generation of the Baby Boomers, followed up with increasing interest and importance by generation X, Y and Z (Líšková et al., 2016). Consumers' interest in natural resources and environmentally friendly products is an important driver for sustainable organizations in general. Considering that organizations are more or less positioned between the producers and the consumers, many would view organizations as responsible for the negative environmental impact that is created (Rudawska, 2018). Consequently, as consumers are holding businesses accountable for taking action towards the environmental issues faced nowadays, it has created an opportunity for the businesses. Sustainability can now be viewed as a competitive advantage amongst organizations, which helps increase value (Rudawska, 2018). Organizations have taken it upon themselves to pursue this opportunity resulting in displays of sustainability both towards employees as well as external stakeholders.

Within the fashion industry, this trend of the growing interest in sustainability is also present. Given the negative publicity that fashion brands received with regards to sustainability and their lack thereof, fashion brands have increasingly been transforming their strategies to a more sustainable one and therefore trying to gain a more positive brand image (Shen, Zheng, Chow & Chow, 2014). Guedes, Paillard-Bardey and Schat (2020) define sustainable fashion as *'a system that promotes ecological integrity, social quality, and human flourishing through products, action, relationships, and practices of use''* (p. 124). Shen et al. (2014) emphasize the importance of sustainable fashion regarding both the environmental aspect as well as the social aspect. As can be derived from the definitions, the social aspect is viewed as equally important within sustainable fashion as the environmental aspect.

To diminish the negative publicity that has been present in the fashion industry, brands have taken sustainability into account and use marketing as a tool to communicate this new perspective. The concept of communicating the sustainable actions of a brand is known as sustainable marketing or green marketing. As the interest of consumers has turned towards sustainable products, practicing sustainable marketing can provide competitive advantage for the organization (Rudawska, 2018), as well as creating long lasting relationships with stakeholders (Cuculeski, Petrovska & Cuculeski, 2016), an increase in positive attitude, and lastly an increase in brand image (Jung, Kim & Kim, 2020).

There is not one way to practice sustainable marketing, hence, sustainable marketing is visible in many different forms. Guedes, Paillard-Bardey and Schat (2020) explain that, specifically in the clothing branch, there is still a *'lack of efficiency in advertising and marketing sustainable fashion''* (p. 124). This also became apparent in the preliminary study that was conducted using 10 different brands to determine key features of communication regarding sustainability of the brand (Appendix I). A content analysis showed both corresponding features between brands when communicating about sustainability, as well as differing features. For instance, brands such as MINI or Tesla did not use Instagram to communicate sustainable characteristics in either visual elements or textual elements, whereas other brands such as Hello Fresh and H&M do communicate sustainable characteristics using different visual and textual elements. There appears to be a lack of efficiency and discrepancy between brands regarding sustainable marketing, hence, a discrepancy between brands regarding sustainable marketing is apparent.

This study aims to reduce the lack of efficiency and discrepancy between brands regarding sustainable marketing, as well as providing more insights regarding the literature by discovering how visuals and message claims influence sustainable marketing advertisements This will be done by answering the following research question:

RQ: How do visualisation and message claims in sustainable marketing influence the perception of sustainability of a clothing brand in an online advertisement?

Relevance study

There appears to be a need for more research discussing the use of different visuals in sustainable marketing. The literature that is available, including theories such as nudging and cues on packaging, have a primary focus on offline communication. However, online marketing increases in popularity and use, hence it would be interesting to research the influence that visualisations in online sustainable marketing advertisements have and how it

could influence consumers' perception of the brand and the sustainability thereof. In addition, there also appears to be uncertainty regarding the literature of message frames. There is not a lot known about the use of message frames in the context of online sustainable marketing advertisements. Therefore, the environmental context and the marketing context are separately discussed. In an environmental contest, both gain frames and loss frames have shown strong patterns. Moreover, gain frames are more present in marketing strategies, however the use of loss frames in a marketing context is still unexplored. Hence, there is still a lot of uncertainty regarding the use of message frames in a sustainable marketing advertisement claims.

Theoretical Framework

Sustainable marketing

The opportunity that arises with sustainability for organizations is meaningful in combination with marketing in particular. As Cuculeski, Petrovska and Cuculeski (2016) argue, it is the *''preferences''* and the *''consumer behaviour that are of importance for marketers''* (p. 84). Moreover, Jung, Kim and Kim (2020) explain that consumer satisfaction, including environmental protection, is the main focus of all marketing activities of an organization. Hence, with the increasing popularity of sustainability amongst consumers, it appears that sustainability therefore is a focus of marketing activities within organizations.

With the rise of sustainability, marketing and sustainability were often viewed to contradict one another. Sustainability promotes, amongst other things, durability, reuse and reduce of products, whereas marketing in general promotes selling more products (Jones, Clarke-Hill, Comfort & Hillier, 2007). Therefore, the integration of sustainability in brand campaigns was not common. Nevertheless, marketing holds the opportunity to bring the sustainability strategy from within the organization outwards, giving it essence to stakeholders, such as consumers and investors. Rudawska (2018) argues that, on the one hand, marketing is the tool used to transfer ideas and messages form the organization towards consumers. On the other hand, marketeers understand the values and needs of consumers as well, resulting in their ability to take into account all external environments and transforming it in their marketing activities. Sustainability is not only carried from within the organization, but also demanded from external stakeholders. It should be noted that, with regards to sustainability, it is often the case marketeers do not participate in the subject of sustainability within the organization (Jones et al., 2007). Nevertheless, sustainability has become an important prospect in today's society, it even shapes marketing. Hence, marketing is such an important tool to use when communicating the sustainability strategy of the business.

The increase in importance and popularity amongst consumers has resulted in the development of a new concept 'sustainable marketing' which includes changing the strategy of the organization to sell sustainable or green products as well as ensuring that the production processes are environmentally friendly (Shen et al., 2014). Sustainable marketing is one of the most recent types of marketing, as it first appeared in papers in 1975 under the name "ecological marketing", after which it developed to the concept of sustainable marketing that is known nowadays (Líšková et al., 2016). As the name already suggests, sustainable marketing focusses on the interconnection between marketing and society, more specifically the impact marketing activities have on "environmental quality and social welfare" (Rudawska, 2018, p.75), and the ability to increase the market for environmentally friendly products (Jung, Kim & Kim, 2020). Cuculeski, Petrovska and Cuculeski (2016) define sustainable marketing as having a focus on sustainability when applying the principles of marketing and therefore creating a lasting relationship with customers. Jones et al. (2007) add to this by stressing the fact that practicing sustainable marketing in turn results in the satisfaction of customers and other stakeholders as it provides environmental value. As the abovementioned definitions suggest, sustainable marketing is the practice of marketing with a focus on both the quality of the environment as well as society. This increases the satisfaction of stakeholders and can

create long-lasting relationships between organization and stakeholder as sustainability has the ability to increase consumer loyalty.

When organizations take sustainability into consideration, it can create opportunities for the business as sustainable marketing influences the image of the brand. According to Jung, Kim and Kim (2020), a focus on sustainability can result in more positively perceived image of the brand, specifically the corporate image of the brand. Moreover, Jung, Kim and Kim (2020) explain the increased positive attitude consumers develop towards the organization. Lastly, according to Chen and Chang (2013), the implementation of green marketing in the strategies of the organization can enhance consumer trust. This all results in a lasting competitive advantage for organizations with a focus on sustainability in their marketing strategy (Rudawska, 2018). Therefore, when sustainable marketing is correctly applied, it can result in positive consequences for the organization.

Even though in theory the concept of sustainable marketing can bring competitive advantage to organizations, in practice this appears to be more difficult to implement. The transformation from "traditional marketing" to "sustainable marketing" is a time consuming and a complex process which, consequently, does not always lead to the preferred results (Líšková, Cudlínová, Pártlová, & Petr, 2016). There is a significant difference between the two, therefore, effort and hard work is required to change the 'traditional' structure within the organization to a more sustainable structure (Líšková, Cudlínová, Pártlová, & Petr, 2016). This is due to the many different aspects one should consider when practicing sustainable marketing, such as 'operations management, marketing ethics, ethics of consumption, corporate social responsibility, sustainable consumption, consumer economics and policy, socially responsible investing, materialism" and so on (Lazar, 2017, p. 46). In order to become a sustainable organization, the business structure has to change, incorporating a more sustainable structure with emphasis towards the production process having as little negative impact on the environment as possible (Líšková et al., 2016). The complexity of sustainable marketing is visible in the clothing industry, as the production as well as the manufacturing and retailing of clothes will have to be transformed to environmentally friendly alternatives (Hill & Lee, 2015). In addition to the complexity of the process, external stakeholders tend to be hesitant towards organizations as they are sceptic towards sustainable marketing. (Líšková et al., 2016). Consequently, communication about the sustainability of organizations has to be handled with care.

Sustainable marketing on social media platforms

Online social media platforms have significantly influenced marketing strategies of brands because of the fast growth of those platforms over the last decade. Social media has created a certain flexibility and creativity in marketing content which transformed the way consumers and organizations interact with one another (Dolan, Conduit, Fahy & Goodman, 2016). Practicing marketing and sustainable marketing strategies on the online platforms is a relatively new concept that is characterised by its own components. Social media provides such an effective platform for sustainable marketing, as it creates two-way interactions between users and organizations as well as the opportunity for networking resulting in communication (Luo, Sun, Shen & Xia, 2020). Moreover, communicating sustainability on social media platforms is

seen as effectual as the characteristics of those platforms provide a good fit with the preferred content of sustainable marketing. For instance, Yeomans (2013) explains that preferred characteristics of environmental messages include transparency, innovation and creativity, which are characteristics that are also encountered on social media platforms. Additionally, according to Sutton (2016), the target audience can be found on social media as it has gained popularity over the more traditional media.

Social media as a tool for communication brings both benefits and challenges. Challenges appear as social media caused a shift in the way information is shared and how consumers participate in conversations (Stareva, 2013). The emphasis of the public towards sustainability and social responsibility, which is easily accessible because of the two-way communication that social media platforms provide, is hard to ignore and can put pressure on organizations (Yeomans, 2013). This includes, amongst other, consumer scepticism towards the information enclosed in sustainable advertisements on social media platforms. Scepticism is caused by online advertisements spreading deceptive information about the sustainability or environmental benefits of products (Luo et al., 2020). Consequently, the scepticism towards sustainable advertisements influences purchase intention of consumers (Luo et al., 2020). This effect is mediated by information utility, as high scepticism results in low information utility, which is the necessary information consumers use to make purchase decisions. Ultimately, low information utility leads to lower purchase intentions for green products.

Nevertheless, the benefits of sustainable marketing on social media platforms overcome the challenges resulting in competitive advantages towards organizations. Benefits include being able to easily reach the right target group as well as large audiences, gaining insights in consumers' behaviours, being transparent and being able to communicate content creatively (Yeomans, 2013). In addition, the way social media platforms are set up increase stakeholder engagement (Sutton, 2016) and can provide new opportunities for the organization (Stareva, 2013). For instance, fast communication, prompt answers to questions, as well as fresh content all increase the quality of the content organizations put out through social media (Reilly & Hynan, 2014). These specific characteristics of social media give organizations the opportunity to communicate messages providing a relationship between the company and environmental issues (Reilly & Hynan, 2014)

The easy two-way communication stream that is provided by the rise of social media does not only provide organizations with a voice; consumers are also able to participate in the conversations. The rise of social media platforms caused a shift in the behaviour of consumers from a passive attitude to active attitude resulting in more interaction and engagement between consumer and brand, such as leaving comments or likes (Dolan et al., 2019). This direct interaction between consumer and brand on social media platforms resulted in a relatively new and unique concept known as online engagement that developed as social media platforms emerged. Dolan et al. (2019) define consumer engagement as *'' a psychological process by which customers move toward being brand loyal and is characterized by emotional, cognitive, and behavioral activation states in brand interactions ''* (p. 2215). This definition explains that engagement goes beyond the purchase of certain products and encompasses certain promotional behaviours concerning a brand indicating a more positive attitude towards that brand. Online engagement outs itself in different ways as the degree of engagement can vary. One of the most basic ways of engagement, which is typical for social media, is through interaction with posts through likes, follows, and comments (Dolan et al., 2019). These actions have value for organizations as it *'creates awareness and changes attitudes among prospective customers, thereby contributing to the acquisition of new customers '' (Malthouse et al., 2013, p. 273).* Higher levels of engagement behaviour include co-creation activities promoting the brand, often seen between influencers and brands. However, engagement is also encountered in unfavourable, negative ways such as complaints (Dolan et al., 2016). Interestingly, the different levels of engagement differ in their 'intensity' as liking a post is perceived as a more passive way of engagement, whereas co-creation is rather an active way (Malthouse et al., 2013). Nevertheless, it should be noted that, even though passive engagement might be a lower level of engagement, it is most likely to be more easily and more broadly distributed than engagement in the form of active co-creation.

A unique aspect of social media platforms that is useful for brands and their communication is what the engagement of the consumer implies. Likes, comments and follows, thus the more general level of engagement on social media, are variables that can indicate how consumers perceive posts or advertisements. The higher the likes, comments and follows, the more positive the post or advertisement is looked upon.

Visualisation of advertisements

As sustainable marketing and the use of social media platforms are increasing, it would be logical for brands and organizations to use social media as a mean to convey their sustainable marketing messages. When looking at social media, for example Instagram, visualisations plays an important role in conveying a message as a visual is the focal point on those platforms. Likewise, brands and organizations will use social media to communicate sustainable actions. Visualisations play an important part in conveying these sustainable messages, especially with regards to social media platforms. Pearce, Niederer, Özkula and Querubín (2019), wrote an Advanced Review in which they discussed the use of social media platforms as a means for climate communication. In their review, however, it was concluded that almost all current studies concerning this topic consist of textual based researches. They acknowledge a lack of research focusing on visual communication on social media towards climate communication. In the following paragraphs, it is discussed how the use of visualisation can aid in the communicational aspect of sustainable marketing.

There appears to be a need for more literature discussing the use of different visuals in sustainable marketing. Nevertheless, the theory of 'nudging' could provide some explanation as to how visuals can prompt consumers towards certain behaviour. Nudging is explained as altering the environment of consumers in such a way that the behaviour of the consumer changes towards the preferred outcome without changing economic incentive (Wilson, Buckley, Buckley, & Bogomolova, 2016). Through altering the environment, it is possible to consciously or unconsciously nudge the behaviour of consumers towards a certain direction (Wilson et al., 2016). In order to nudge people, however, it is important to know which aspects to alter to prompt the desired behavioural change (Chris, 2015). This depends on the environment and situation. For instance, when nudging consumers in the supermarket towards

the healthier options, the placement of the healthy products influences the choices consumers make. Research by Ounjai, Suppaso, Hohwy and Lauwereyns (2020) confirms the nudgingvolatility hypothesis which explains that if 'mild' images are used, certain positive or negative cues can nudge people their perceptions towards the positive or the negative side. This is possible only in situations which are volatile, such as the evaluation of food images.

Visual communication on packaging has been widely researched. Product packaging is extensively used as a mean to display cues, such as sustainability cues, which can nudge people towards certain behaviour. Sustainability cues can be defined as cues that are connected to environmental, social and ethical considerations (Rees, Tremma & Manning, 2019). Both direct and indirect cues result in certain inferences being made by consumers regarding the product. Sustainability labels, for instance, provide a way to use visual elements relating to environmental, social or ethical aspects, as a form of communication which consumers take into consideration when buying products (Grunert, Hieke & Wills, 2014). The use of pro-social cues leads consumers to associate that product with environmentally friendly aspects (Rees, Tremma & Manning, 2019). Visual environmental cues on packaging allows consumers to consider those visual cues and deduct conclusions (Rees, Tremma & Manning, 2019). However, the theories regarding nudging and cues on packaging are primarily focused on offline communication. Therefore, it could be interesting to research to what extent the use of an image on social media can influence how the receiver perceives the brand and the environmental friendliness thereof.

Even though academic literature regarding the use of visualisation in sustainable marketing is scarce, Yelder (n.d.) provides '*a new visual language for sustainability*''. In his research, it is adviced that the use of the colour green can be beneficial for sustainable communication. This is because over the years, green has become highly associated with sustainability (Yelder, n.d.). The colour green is an obvious way to communicate sustainability towards consumers. However, successful communication using green to communicate sustainability only works when consumers are not sceptic about it. It should be noted that congruency in marketing results in better prompting towards consumers. McKay-Nesbitt and Yoon (2015) explain that congruency in marketing messages has the ability to increase the effectiveness of the message. Therefore, congruency between the product promoted and the visual elements that are part of the sustainable marketing advertisement is important.

As sustainable marketing is present on social media, visuals are an important aspect to consider in the communication. However, limited research has been done regarding visual elements of sustainable marketing. As sustainability cues, such as labels on packaging, can lead to behavioural change, it can be derived that the use of images on social media has the ability to influence how sustainable a consumer perceives the product to be depending to what extend people associate the image with sustainability. This research aims to discover the influence of visualisation on online sustainable marketing advertisements, specifically how visualisations can aid sustainable communication regarding products and brands. Because Yelder (n.d.) explained green is associated with sustainability, it is expected that natural visualisation positively influences sustainable marketing advertisements on social media platforms compared to the use of visualisation including plastic, which is the raw material of recycled polyester. The following hypothesis is expected:

H1: The use of natural visualisation in sustainable marketing advertisement of a clothing brand will positively influence a) perceived attitude towards the brand, b) purchase intention, c) perceived sustainability towards the brand, d) trust towards the brand, and e) online engagement of the advertisement as compared to using raw material visualisation

Gain and Loss framing in advertisement claims

Sustainable marketing is a complex process that outs itself in various different results and end products. Different ways of practicing sustainable marketing exist, as multiple elements can be used in order to create campaigns or advertisements. One element that greatly influences the effectiveness of sustainable marketing, is how the messages are framed. The following will discuss positive and negative frames and the impact it can have on sustainable marketing.

Frames are often used in communication, as it has the ability to alter attitudes and opinions of the receivers. With framing, specific parts of information are highlighted giving it either a positive or a negative aspect (Bertolotti & Catellani, 2014). Tversky and Kahneman (1981) explain that choices are immensely influenced and will change based on whether the message is framed positively or negatively. Consequently, message frames are an important tool used in communication, as it influences and steers people towards a certain direction. Generally, two types of frames are used: the gain frame and the loss frame (Guedes, Paillard-Bardey and Schat, 2020). A gain frame refers to the perceived benefits or gains of the outcome, whereas a loss frame refers to the perceived costs or losses of the outcome (Cheng, Woon & Lynes, 2011). Whether a message uses a gain frame or a loss frame influences the opinions, as well as the behaviour of the receivers of those messages. Stakeholders perceive messages different depending on which frame is used, resulting in decisions being influenced by the type of frame utilized. Tversky and Kahneman (1981) explain that people tend to respond more strongly towards negativity or loss than their response to positivity or gains. Consequently, negative or loss frames are often used as loss frames generate forceful reactions that result from the motivation to prevent displeasures mentioned in the message.

Elements influencing frames

Generally, the type of frame used influences the opinions and behaviour of the receivers of those messages. However, what type of frame should be used in order to achieve the desired effectiveness depends on, and is influenced by, different aspects. Message frames are not as straightforward. External elements moderate different results when using a positive or gain frame versus a negative or loss frame. Therefore, different situations and claims ask for different frames. One of those external elements influencing frames is risk. The theory of Tversky and Kahneman (1981) explaining the effects of risk is one of the most widely accepted theories. Using the Prospect Theory, Tversky and Kahneman (1981) demonstrate that people are more likely to accept risks when it is framed negatively, whereas people who receive the positively framed messages are more likely to avoid risks. Rothman and Salovey (1997) add to this by suggesting that risk in combination with a loss frame not only aids in the acceptance or avoidance of risk, but also results in certain forms of persuasive behaviour. For instance, a loss frame can coax behaviour towards taking action upon the risk resulting in choices being

made with higher risks, whereas risk in combination with gain frame motivates a more cautious behaviour. In sum, the element of risk in combination with a loss frame is strongly effective and is prone to prompt people their opinions and behaviour towards the desired outcome.

A second factor influencing the effectiveness of frames is uncertainty. Morton, Rabinovich, Marshall and Bretschneider (2011) explain with their research that uncertainty moderates the effectiveness of gain and loss frames. People's intentions to act upon a negatively framed message decreases when the outcomes are unpredictable. Similarly, when the outcomes are unpredictable and the message is framed positively, people's intention to act upon it increases. So, as explained with the prospect theory, overall messages or claims using a loss frame are more effective as people's intention to act upon the message is higher than when a gain frame is used. However, when the message includes an uncertain outcome, a gain frame appears to be more effective.

Lastly, promotion or prevention-focused attitude provides another aspect that is important to take into account when using framed messages. The regulatory focus theory of Higgins (1997) explains that people are either motivated through promotion focus or prevention focus. When a promotion focussed attitude is present, people tend to be only concerned about the benefits, positive outcomes or gains. Contrarily, a prevention focussed attitude is nourished by the presence or lack of costs, negative outcomes or losses (Higgins, 1997). Therefore, combining the type of attitude with the use of message frames can be powerful. Bertolli and Catellani (2014) explain that the effectiveness of a message increases when someone who is promotion-focused is approached with a gain frame. Similarly, effectiveness of a message increases when someone who is prevention-focused is approached with a loss frame (Bertolli & Catellani, 2014). Further elaboration explains that loss frames create negative emotions resulting in behaviour to prevent those unfavourable outcomes, therefore establishing an effective way to discourage certain behaviours (Cheng, Woon & Lynes, 2011). Hence, to discourage or prevent certain behaviour a loss frame would appear to be more effective whereas encouraging certain behaviour would be more effective in combination with a gain frame.

Environmental issues and frames

Gain and loss frames have been researched thoroughly over the past years, however, in an environmental context it appears there are still a lot of questions concerning the use of message frames. Communication about environmental issues in combination with gain and loss frames has not shown strong patterns. Uncertainty regarding the use of frames in an environmental context is still existent. Different researchers, such as Loroz (2007) and Cheng, Woon and Lynes (2011), mention in their papers that no clear results are shown in the different studies regarding message frames in combination with environmental issues. This can be explained by the fact that environmental situations do not reveal a clear risk factor nor a prevention versus detection framework. The threat of environmental issues is focused in the future, which is therefore not experienced as a risk by individuals nowadays (Bertolli & Catellani, 2014). Hence, the previously mentioned factor of risk influencing the effectiveness of message frames do not necessarily apply to environmental contexts.

Nevertheless, the general idea with message frames is applicable to environmental communication as well. For instance, when the message or claim aims to increase the use of

green energy, a positive or gain frame is opted. Contrarily, when the aim is to reduce CO₂ emissions, a negative or loss frame is opted in order to receive the desired responses (Bertolli & Catellani, 2014). The idea of the Prospect Theory appears to be applicable towards environmental messages, as messages regarding environmental issues that are negatively framed tend to generate stronger responses and stakeholders are more likely to act up on it than positively framed messages (Bertolli & Catellani, 2014). Overall, it can be concluded that negatively framed messages are more effective when communicating about sustainability, specifically when environmental behaviour is promoted (Cheng, Woon & Lynes, 2011). Interestingly, however, Cheng, Woon and Lynes (2011) do argue that it is advised to use a gain frame when someone is already engaged in sustainable behaviour, as it increases the intention to act even more than loss framed messages when communicating about the environment using a prevention context.

Advertising and frames

The use of message framing in marketing context is a widely accepted technique to increase the effectiveness of the marketing claims. The strength of framing with regards to marketing is the fact that consumers react differently towards advertisements that adopt different frames, even though the heart of the message is the same (Pervan & Vocino, 2008). Especially in combination with the right target group, the use of message framing can enhance the effectiveness of a campaign (Cheng, Woon & Lynes, 2011). Hence, framing is commonly used in marketing techniques.

The use of positive frames compared to negative frames appear to be more popular in marketing advertisements. Positive frames tend to release positive emotions from the consumers, which aids to promote the preferred behavioural change. According to Guedes, Paillard-Bardey and Schat (2020) the positive emotions created by positively framed messages result in *'increased receptiveness to new ideas, possibilities, and interpretations ''* (p. 125). Moreover, Pervan and Vocino (2008) argue that the use of positive frames in advertisements is popular as it is viewed as a safe option. However, interestingly, different research has shown negative or loss frames to be more effective in causing behaviour change in marketing advertisements and campaigns.

In such a manner, gain frames are mainly visible in marketing strategies as marketeers seem to be apprehensive of using negative frames. Janis and Feshbach (1953) give reason for this behaviour in their research on the effects of 'fear-arousal'. The aim of the research was to explore the effects of fear in communication on the emotions and behaviour of people. Results showed that the level of fear created in communication needs to be exactly right in order to deliver the desired effects. Too little fear will not generate the desired response whereas too much fear can create a dislike towards the campaign.

Nonetheless, the loss aversion theory, which is an important aspect of the Prospect Theory (Tversky & Kahneman, 1981), explains that loss frames have considerably higher psychological impact in risk situations than gain frames have. Gal and Rucker (2018) provide a literature review in which loss aversion is elaborately discussed. In this review it is concluded, however, that not enough research has been done to support that loss frames are more effective than gain frames in risk situations. In addition, Pervan and Vocino (2008) concluded in their research that there is a *'lack of consistency with which academic findings translate to*

marketing communication practice'' (p. 643). Different studies regarding the use of message framing show different results in addition to different techniques used by marketeers. Most marketeers use positive frames, which leaves the use of negative frames in marketing unexplored. Therefore, it is hard to say which framing technique works best for marketing, hence this needs to be explored more.

Overall, it is established that frames strongly influence people their opinions and behaviours depending on which frame is being used in what situation. Different aspects, such as risk and uncertainty, need to be taken into account, as they greatly affect the effectiveness of the frame used. Moreover, environmental messages in combination with loss frames generally appear to be more effective than gain frames (Cheng, Woon & Lynes, 2011). Contrarily, in marketing, gain frames are the more favoured framing method used (Guedes, Paillard-Bardey & Schat, 2020). These seem to have stronger effects on consumers, yet, the lack of loss frames within the marketing context leaves this area still unexplored. As sustainable marketing is considered to consist of a combination of these two aspects, it is unclear which message frame would have the desired results for the advertisement claims. This research attempts to reduce the uncertainty by analysing both frames. The following hypothesis is expected:

H2: The use of gain claim in an online sustainable marketing advertisement of a clothing brand will positively influence a) perceived attitude towards the brand, b) purchase intention, c) perceived sustainability towards the brand, d) trust towards the brand, and e) online engagement of the advertisement as compared to using loss claims

Interaction effects visualisation x message frames

Both message frames and visualisation are used in order to convey sustainability messages. As described by Tversky and Kahneman (1981), the Prospect Theory explains that loss frames tend to be more effective when communicating about sustainability. However, when looking at the marketing perspective, Guedes, Paillard-Bardey and Schat (2020) argue the use of gain frames. Combining gain frames in marketing messages creates positive emotions towards the receivers. Loss frames tend to be riskier in combination with marketing, hence such frames are avoided. Therefore, it is expected that the use of gain claims in sustainable marketing advertisement will have a positive effect on the perceived sustainability of the brand.

Similarly, visualisation also influences the effectiveness of the environmental message conveyed using sustainable marketing. In social media, such as Instagram, the visualisation is the vocal point of the online communication (Breese, 2014). The use of visualisation in combination with sustainable marketing has not been extensively researched yet, however, as Yelder (n.d.) explains, visualisation with green appears to be effective in order to successfully convey an environmental message. Therefore, it is expected that the use of natural visualisation in sustainable marketing advertisements will have a positive effect on the perceived sustainability of the brand.

As both a gain claim and natural visualisation are expected to have a positive effect on the perceived sustainability of the brand, it is anticipated that an interaction effect exist between the two, increasing the effectiveness of the message. Therefore, the following hypothesis is expected:

H3: The effect of natural visualisation in sustainable marketing advertisement of a clothing brand in combination with a gain claim results in higher scores on a) perceived attitude towards the brand, b) purchase intention, c) perceived sustainability towards the brand, d) trust towards the brand, and e) online engagement as compared to the effect of raw material visualisation in combination with a loss claim

Greenwashing

Implementing sustainable marketing in an organization can create opportunities and competitive advantage for that organization. Nevertheless, it has been realised sustainable marketing needs to be carried out with care as it can create backlash, resulting in negativity towards the organization. A reoccurring issue that organizations have been facing, is not being transparent towards their stakeholders. Organizations often withhold information specifically regarding sustainability, after which the organization is perceived as more sustainable than it actually is. The concept of pretending to be more sustainable than one is, is also known as greenwashing (Junior, Martínez, Correa, Moura-Leite & Silva, 2019). According to Delmas and Burbano (2011), greenwashing can be defined as *''misleading consumers about firm environmental performance or the environmental benefits of a product or service''* (p. 66). The concept of greenwashing leads back to the 1960's, however, the terminology of greenwashing was first introduced in 1986 (Torelli, Balluchi & Lazzini, 2020). This shows that greenwashing has been apparent for quite some time.

In the beginning years, greenwashing was practiced as organizations felt a growing pressure to comply to environmentally friendly aspects. Stakeholders became increasingly more interested in sustainability up to the point where stakeholders wanted to buy sustainable products and demanded that organizations take responsibility. In order to keep up with the growing interest and responsibility, organizations started communicating about sustainability to compete with competitors without actually following up on it, resulting in the activity of greenwashing (Torelli, Balluchi & Lazzini, 2020). Because of this, stakeholders nowadays have a sceptic attitude towards organizations that communicate about their sustainability. Consumers' scepticism towards the disclosure of certain information regarding sustainability negatively influences purchase intention (Rausch & Koppling, 2021). Kahraman and Kazançoglu (2019) support these findings in their research and add to this by concluding that, besides the affected purchasing behaviour, consumers' attitudes towards products and brands is also negatively affected. Hence, companies need to be cautious regarding their communication, ensuring that it is not only 'talk' but that it will become reality as well.

Even though present-day it is commonly known that greenwashing creates negative publicity, it is still a frequent occurrence. One reason for this is the legitimacy that is created towards stakeholder by communicating about sustainability, as environmentally friendly organizations are in line with the popular trend of sustainability that is present nowadays. (Walker & Wan, 2012). Legitimacy has multiple benefits for an organization, such as *''greater access to resources, stronger exchange relationships with business partners, and better job applicants subsequently leading to a stronger work force'' (p. 229)*, which ultimately leads to an increase in financial performance (Walker & Wan, 2012). However, if stakeholders notice organizations do not follow up with the necessary actions, the legitimacy will experience backlash. A second reason for organizations to participate in greenwashing is because the organization can 'pretend' to be environmentally friendly without actually taking action. This is also known as symbolic actions, which focus on the future actions an organization will take (Walker & Wan, 2012). Similarly, symbolic actions will create negative effects towards the legitimacy of the organization if they are not followed up on.

One way to communicate about sustainability without the suspicion of greenwashing is called green highlighting. Walker and Wan (2012) introduce the concept of green highlighting, which focusses its communication on what the organization has already done or is currently doing and what the organization is planning to do in the future with regards to the environment. Green highlighting is expected to generate positive reactions from stakeholders as the previous and current sustainable actions in combination with the future plans of the organization regarding the environment shows continuity between internal values and external communication. Moreover, because green highlighting incorporates the aspect of the future, it shows that the organization is devoted and will also incorporate sustainability in future strategies (Walker & Wan, 2012). Nevertheless, those future strategies still need to be followed up in order to put an end to greenwashing. One of the main advantages of green highlighting is that it can increase the green brand image, which in turn creates a positive effect on purchase intentions (Kahraman & Kazançoglu, 2019)

When looking at the current fashion industry, fast fashion is the trend that has been visible for the last couple of years. Competitiveness between brands and low prices guarantee difficulty making profits, hence selling large quantities is necessary for the fashion brands (Niinimäki, 2013). Moreover, the price pressure the fashion industry experiences increases the ethical issues throughout the supply chain and decreases the likelihood of sustainability being integrated (Hansen & Schaltegger, 2013). Consequences of fast fashion are clearly visible in the environmental footprint of the fashion industry, as the industry negatively impacts air, soil and groundwater as well as large amounts of CO₂ emissions (Rausch & Koppling, 2021). Awareness regarding the growing footprint of the clothing industry is increasing and consumers are demanding change.

Because of the overall negative impact of the fashion industry on the environment (Rausch & Koppling, 2021), it is likely consumers are sceptic towards fashion brands that communicate about sustainability. However, incorporating sustainability in the strategy of the fashion brand can create competitive advantage as less consumption can be promoted whilst still increasing the prices of sustainable clothing. In order to fully comply to sustainability, though, this strategy has to be incorporated in the marketing and business plans, which is a commitment that is challenging to make as all ethics need to be taken into account when it is integrated in the plans (Niinimäki, 2015). Moreover, research by Kahraman and Kazançoglu (2019) explains that visual and textual elements can aid in the increase of perceived

greenwashing. Visual elements which can cause greenwashing are amongst others *'plant and fruit images in the ads and on the packages'* (p. 1222). It is important to implement sustainable marketing correctly, as consumers are critical and sceptic towards the industry.

When looking at fashion brands and at the fashion industry in general, it could be interesting to make a distinguishment between the two. For instance, it can be expected that consumers are less sceptic towards environmentally friendly fashion brands that have sustainability incorporated in their marketing strategy when those brands communicate about sustainability. This is also in line with the theory of green highlighting, as both past and future actions of a sustainable brand have an environmentally friendly focus. However, the clothing industry in general is known for its unethicalness in general and specifically its environmental pollution (Niinimäki, 2013). As the clothing industry still engages in fast fashion and pollution, the industry itself is far from sustainable. Thus, there is a discrepancy between sustainable fashion brands and the fashion industry in general.

In previous paragraphs, it was explained that natural visualisation, gain claims and a combination of the two are expected to have a positive effect on sustainable marketing advertisements. As fashion brands and the fashion industry differentiate from one another, this effect is not necessarily expected for the fashion industry in general. In addition, green highlighting is not applicable to the fashion industry either. This, in combination with the theory of Kahraman and Kazançoglu (2019) explaining that visual and textual elements can aid in the increase of perceived greenwashing, could cause a different reaction of consumers after viewing a sustainable marketing advertisement towards the fashion industry in general as compared to the reaction of consumers towards the sustainable fashion brand. Therefore, the following hypotheses are expected:

H4: After having viewed a sustainable marketing advertisement of a clothing brand incorporating natural visualisation compared to raw material visualisation, consumers will perceive a higher greenwashing effect towards the clothing industry

H5: After having viewed a sustainable marketing advertisement of a clothing brand incorporating a gain claim compared to a loss claim, consumers will perceive a higher greenwashing effect towards the clothing industry

H6: After having viewed a sustainable marketing advertisement of a clothing brand incorporating natural visualisation and a gain claim compared to raw material visualisation and a loss claim, consumers will perceive a higher greenwashing effect towards the clothing industry

Conceptual Research model

The following gives a visual overview of the research model (Figure 1) as well as the formulated hypotheses (Table 1) that will be analysed in this study.

Figure 1

Concept research model



Table 1

Hypotheses overview

Hypotheses

- H1 The use of natural visualisation in sustainable marketing advertisement of a clothing brand will positively influence a) perceived attitude towards the brand, b) purchase intention, c) perceived sustainability towards the brand, d) trust towards the brand, and e) online engagement of the advertisement as compared *to using raw material visualisation*
- H2 The use of gain claim in an online sustainable marketing advertisement of a clothing brand will positively influence a) perceived attitude towards the brand, b) purchase intention, c) perceived sustainability towards the brand, d) trust towards the brand, and e) online engagement of the advertisement as compared to using loss claims
- H3 The effect of natural visualisation in sustainable marketing advertisement of a clothing brand in combination with a gain claim results in higher scores on a) perceived attitude towards the brand, b) purchase intention, c) perceived sustainability towards the brand, d) trust towards the brand, and e) online engagement as compared to the effect of raw material visualisation in combination with a loss claim
- **H4** After having viewed a sustainable marketing advertisement of a clothing brand incorporating natural visualisation compared to raw material visualisation, consumers will perceive a higher greenwashing effect towards the clothing industry
- **H5** After having viewed a sustainable marketing advertisement of a clothing brand incorporating a gain claim compared to a loss claim, consumers will perceive a higher greenwashing effect towards the clothing industry
- **H6** After having viewed a sustainable marketing advertisement of a clothing brand incorporating natural visualisation and a gain claim compared to raw material visualisation and a loss claim, consumers will perceive a higher greenwashing effect towards the clothing industry

Method

This research gives new insights into how visualisation and advertisement claims in online sustainable marketing advertisements influence the perception of consumers. Six hypotheses were formulated and analysed in order to provide new insights into the aspects that influence the effectiveness with which sustainability can be communicated. Firstly, the stimuli for the main study were tested by means of a pre-test. After analysing the results of the pre-test, the final four manipulations, which resemble mock-up Instagram advertisements, for the main study were created. Lastly, by means of an online survey, data was gathered about the different manipulations in order to detect how respondents react towards those stimuli.

Research design

This study researched how visualisation and advertisement claims influence online sustainable marketing advertisements on Instagram. To test the formulated hypotheses, an experimental study was executed using a 2 x 2 experimental design (Table 2). The first independent variable tested was visualisation, which is divided into 'natural' visualisation and 'raw material' visualisation. The second independent variable was advertisement claims, which includes gain claims and loss claims. The independent variables were tested using four manipulations that were randomly distributed among respondents. Using this design, it was analysed whether images including natural visualisation versus raw material visualisation had a more positive effect towards the observed sustainability of the clothing brand. Moreover, the study also tested how the gain and the loss claims in sustainable marketing advertisements has an influence on the perceived sustainability of the clothing brand. In addition, it was also explored whether there is an interaction effect present between visualisation in combination with the advertisement claims. Lastly, it was measured whether a greenwashing effect is influenced by visualisation, advertisement claims and a combination between the two. The respondents are both female and male participants with ages varying from 18 until 64.

Table 2

			Claim	
		<u>Gain</u>	Loss	
sation	<u>Natural</u>	Natural visualisation & Gain claim	Natural visualisation & Loss claim	
Visual	Raw	Raw visualisation & Gain claim	Raw visualisation & Loss claim	

Advertisement conditions

Stimuli

Different stimuli were used in order to test the effectiveness of sustainable marketing regarding clothing advertisements. The clothing advertised in the stimuli are sweaters made from recycled polyester. It was chosen to display sweaters in the visualisation as it is a neutral clothing piece which is commonly worn, especially during the fall and winter period in which this study took place. The sweaters were folded, therefore, participant's preferences in shape and look did not influence the results. In addition, the colours of the displayed sweaters were neutral colours. Testing the different stimuli in the pre-test had two purposes. Firstly, it was tested whether participants were able to differentiate between images of natural material and raw material as well as distinguish the gain claim and the loss claim from one another. Secondly, results from the pre-test show which stimuli is the best fitting stimuli to use in the manipulations for the main study. As this research focusses specifically on sustainable marketing advertisements on Instagram, it is important that the stimuli fit accordingly in an Instagram advertisement. Figure 2 provides an example of an Instagram post of a clothing brand.

Figure 2

Example Instagram advertisement



When looking at the different stimuli for the independent variable visualisation, it was decided to include natural elements as one stimuli, as it is a reoccurring element in sustainable advertisements. However, literature, or lack thereof, shows it is not exactly clear whether natural visualisation results in the desired effects of increased perception of sustainability. Moreover, the clothing in the image are made from recycled polyester, which ultimately consists of plastic. Recycled polyester is not an organic material however, hence it would not be congruent with a natural background. Therefore, visualisation including the raw material of recycled polyester was incorporated as a second stimuli for visualisation

It was decided to include a gain and a loss claim in the stimuli as well, as it is still unclear how each frame influences online sustainable marketing advertisements. Environmentally friendly communication is most of the time combined with a loss frame in the communication. However, as gain frames are more often used in marketing strategies, it is uncertain what the effects of each frame is in combination with sustainable marketing claims.

Therefore, the independent variables of online sustainable marketing advertisements that will be researched are visualisation and advertisement claims. For each manipulation, the sweaters were displayed exactly the same, however, the visualisations and claims were altered. This resulted in four different conditions; the first condition consisted of natural visualisation and a gain claim, the second condition included natural visualisation and a loss claim, the third condition included visualisation of raw materials and a gain claim, and lastly, the fourth condition showed raw materials and a loss claim.

Pre-test of stimuli designs

Before the hypotheses can be researched, the characteristics for the stimuli displayed in the main study need to be established. The different visualisations and advertisement claims that were researched in the main study were determined by means of a pre-test (appendix III). The first part of the pre-test consisted out of eight images; four natural images and four images including raw material of recycled polyester. The respondents were asked to answer a set of four questions after viewing each image. The images were shown in randomized order. Additionally, the second part of the pre-test consisted of seven advertisement claims out of which four phrases included a gain frame and three phrases included a loss frame. Again, the respondents were asked to answer a set of questions after viewing each sentence, which were displayed in randomized order. The pre-test was constructed using Qualtrics Survey Software and distributed via WhatsApp. In total, six males and fifteen females participated in the pre-test, resulting in 21 respondents aged between 18 and 54.

Manipulation of visualisation

Visualisation is an important factor to take into account when communicating about sustainability. Especially in sustainable marketing advertisements on Instagram, the visualisation is the main focus of the message. In order to ensure the visualisations used in the main study were understood correctly, different visualisations for each factor were tested in the pre-test. When communicating about sustainability, visualisations including natural elements are often used as a mean to convey the message. As Yelder (n.d.) explains, greenery is a convenient way to express sustainability, as people associate green with environmentally friendly aspects. Therefore, it was decided to test four different visualisation images including natural elements. However, as the clothing pieces displayed in the images are made out of recycled polyester, the natural images are not congruent with the clothing items. Therefore, another four images including different backgrounds consisting of the raw material of

polyester, also known as plastic, were also tested. Participants were asked to answer a set of four questions after each image shown. Examples of visuals that were included in the pre-test are presented in figure 3. In appendix II, a more elaborated figure presents a full overview of the stimuli used in the pre-test.

Figure 3

Stimuli visualisation



Natural 4

Raw material 1

To test the different visuals, a set of four statements was included after each image. Respondents were asked to answer each statement using a 5-point Likert scale, ranging from completely disagree to completely agree. As the images need to be perceived as a realistic visualisations of an advertisement, the first statement presented was *'it seems realistic if this image is used as an advertisement for a clothing brand''*. Moreover, it was measured which image was perceived as most congruent and which image was perceived as least congruent with recycled polyester using the following statement *'This image is congruent with recycled polyester, which is the material the clothes are made out of''*. Lastly, it was necessary to test the natural elements and the elements of raw material in the visualisation to ensure respondents perceive the images as they were intended to. This was measured with the following statements: *'The background of the image contains elements of nature''* and *'the background of the image contains materials out of which recycled polyester is made''*.

Results of visualisation

The results of the pre-test were added in SPSS and subsequently analysed using descriptive statistics. For each statement, the mean and standard deviation of the corresponding visualisations were calculated. For instance, when looking at the results of the question *''the background of the image contains elements of nature ''*, the mean and standard deviation from the responses were calculated for all four images. The highest results of this statement correspond with the image including natural visualisation and the lowest scores correspond

with the image including raw material. This process was repeated for all four questions. The results are presented in table 3 below.

Table 3

Descriptive statistics visualisation stimuli

	Realistic M (SD) ^{a)}	Congruent M (SD) ^{a)}	Nature M (SD) ^{a)}	Raw Material M (SD) ^{a)}
Natural 1	3.76 (1.136)	2.86 (1.153)	4.05 (0.973)	2.19 (0.928)
Natural 2	3.86 (1.014)	2.95 (0.921)	4.10 (0.700)	1.86 (0.573)
Natural 3	3.67 (1.017)	2.67 (1.065)	4.29 (0.784)	2.19 (0.873)
Natural 4	3.43 (1.121)	2.76 (0.768)	4.57 (0.507)	1.71 (0.644)
Raw Material 1	2.95 (1.161)	3.95 (0.921)	1.71 (1.007)	4.05 (1.161)
Raw Material 2	1.86 (0.964)	3.62 (1.024)	2.38 (1.322)	3.67 (1.197)
Raw Material 3	2.14 (1.236)	3.48 (1.078)	1.57 (1.076)	4.00 (1.183)
Raw Material 4	3.10 (1.261)	3.62 (0.805)	2.48 (0.814)	3.52 (0.873)

a) 5-point Likert scale (1=completely disagree / 5=completely agree)

Based on the results of the means and standard deviation, the condition ''natural 4'' showed the most desirable results within the group of natural visualisations. This image scored highest when looking at elements of nature and scored lowest when looking at the raw material of recycled polyester. A One Sample T-Test showed significant results for ''nature'' t(20)=14.20, p=0.00 and ''raw material'' t(20)=-9.15, p=0.00. Therefore, it was concluded that the visualisation of nature 4 included enough nature in the image to be of significant value, as well as enough non-raw materials. The One Sample T-Test for ''congruency'', however, did not show a significant result t(20)=-1.42, p=0.17. It is desired that nature 4 shows no congruency, as this implies that the background does not include raw materials. However, the mean (M=2.72, SD=0.77) was not low enough to display a significant effect. This indicates that the respondents perceived the raw materials of recycled polyester to be in the visualisation of natural 4. Therefore, this condition is not a perfect representation of a natural visualisation.

When looking at the results from the visualisations of the raw material, the condition "raw material 1" showed the most suitable results. Raw material 1 showed the best mean for both for "congruent" and "raw material". These results were again tested using the One Sample T-Test. The means for raw material 1 were significant for "congruent" t(20)=4.74, p=0.00, "nature" t(20)=-5.58, p=0.00 and "raw material" t(20)=4.14, p=0.00, as the means

differed enough from the middle of 3 in a 5-point Likert scale imply something about how congruent the image is, the amount of natural elements the image includes and the amount of raw materials the image includes.

Lastly, results from nature 4 and raw material 1 were compared using Independent Samples T-Test. First, the results for ''realistic'' were compared. The analysis did not show a significant result t(40)=-1.35, p=0.18. This implies that both visualisations are perceived similarly in terms of how realistic the visualisations are. Moreover, Independent Samples T-Test between natural 4 and raw material 1 showed a significant difference for ''congruency'' t(40)=4.55, p=0.00. Therefore, it can be said that there is a significant difference between the perceived congruency between the background and recycled polyester, as the natural visualisation did not show material of recycled polyester and the raw material visualisation did show elements of recycled polyester in the background. Lastly, the results for ''nature'' t(40)=-11.61, p=0.00 and ''raw material'' t(40)=8.06, p=0.00 were compared. The T-Test showed significant results for both. This implies that the respondents recognize natural elements in natural 4 and raw materials in visualisation raw material 1. Consequently, the visualisation. The visualisation raw material 1 was used in the main test as well as it was perceived as the best raw material visualisation.

Manipulation of advertisement claims

Different gain and loss claims were tested in order to determine which phrase was most clearly perceived as a loss frame and which phrase was most clearly perceived as a gain frame. According to Pervan and Vocino (2008), the use of different frames is common in marketing, as it influences how messages are perceived. Effects from gain frames can strongly differ from effects caused by loss frames. Therefore, it was necessary to test different phrases and determine which phrases were most clearly perceived as a loss and a gain phrase. Seven different phrases were tested consisting of four different gain phrases and three loss phrases (Figure 4).

Figure 4

Advertisemen	et Claims
Gain 1	Clothing made from recycled polyester helps make a greener planet
Gain 2	Clothing made from recycled polyester will create a better world
Gain 3	Clothing made from recycled polyester helps make this planet a better place
Gain 4	Clothing made from recycled polyester creates a green wardrobe
Loss 1	Clothing made from recycled polyester reduces plastic waste
Loss 2	Clothing made from recycled polyester prevents pollution
Loss 3	Clothing made from recycled polyester prevents climate change

Stimuli advertisement claims

During the pre-test, the phrases were shown in randomized order. After each phrase, participants were asked to answer a set of three statements with a 5-point Likert scale ranging from completely disagree to completely agree. In order to check whether the phrases would be considered realistic for online advertisements, the first statement was *'It seems realistic that this phrase is used in an advertisement for a clothing brand''*. The other statements focused on whether the phrase was considered to include a gain frame or a loss frame. In order to test the gain frames, the following statement was presented: *'This phrase ensures a better world''*. Lastly, with the statement *'This phrase prevents the world from becoming worse''*, it was tested to what extend the phrase is considered to include a loss frame.

Results of advertisement claims

In order to analyse the results from the advertisement claims, a descriptive statistics analysis was performed, with which the mean and standard deviation of the corresponding phrases for each question was calculated. For instance, when looking at the question *'it seems realistic that this phrase is used in an advertisement for a clothing brand''*, the mean and standard deviation of each of the phrases for that question was calculated. The phrases with the highest mean were perceived as most realistic when used in advertisements. The results of the descriptive statistics analysis are presented in table 4.

Table 4

	Realistic M (SD)	Better World M (SD)	Prevent M (SD)
Gain 1	3.71 (0.717)	3.57 (0.978)	3.43 (0.926)
Gain 2	3.67 (0.913)	3.62 (0.865)	3.71 (0.717)
Gain 3	3.81 (0.928)	3.57 (0.978)	3.26 (1.117)
Gain 4	3.62 (0.740)	3.14 (0.964)	3.14 (1.014)
Loss 1	3.81 (0.869)	3.65 (0.943)	3.64 (0.975)
Loss 2	3.19 (0.814)	3.48 (0.873)	3.57 (0.926)
Loss 3	3.10 (0.944)	2.95 (1.244)	3.00 (1.183)

Descriptive statistics advertisement claims

When looking at the results from the four different gain claims, it can be observed that they were inconclusive as not one claim stands out from the others. One Sample T-Tests showed significant results for Gain 1, Gain 2 and Gain 3. Therefore, it can be said that the means differed enough from the middle point 3 in the 5-point Likert scale. Gain 4 only showed significant results for "realistic". Nevertheless, none of the gain claims stood out as the results for categories "better world" and "prevent" were all very close to one another. These results

are not preferred, as the gain phrases are supposed to have higher means for "better world" and lower means for "prevent".

When looking at the results from the loss phrases, they also appear to be inconclusive. One Sample T-Tests were conducted in order to see whether the results were significant. Results from loss 1 were all significant. Loss 2 showed significant results for "better world" and "prevent". Loss 3 did not show any significant results. However, none of the loss claims stood out as the means of "prevent" and "better world" show very similar results.

In addition, Independent Samples T-Tests of "better world" and "prevent" were conducted for all combinations of the gain and loss claims. All results were insignificant, implying that not one combination of the gain and loss phrases showed enough differences in the means in order to be able to say that the phrase was only perceived to include a gain frame and not a loss frame and vice versa.

Because all means of 'better world' and 'prevent' are close to one another and do not show a significant difference, it can be argued that the statements used to test the gain and loss claims were not clear enough and were interpreted different than was intended. Therefore, a follow-up test was performed using the same phrases, however, this time a different type of questioning was used.

Follow-up pre-test advertisement claims

The lack of significant results for both the gain and loss claims was presumably due to unclear phrased questions. Therefore, a follow-up pre-test was conducted focussed on the gain and loss phrases. Five respondents completed the follow-up test. This time, respondents were asked to categorize the seven phrases into two categories. These categories were labelled as ''these items ensure a better world'', which is the gain category, and ''these items prevent a bad situation from happening'', which is the loss category. Afterwards, the respondents ranked the items in each category from best fitting to least fitting. The results are shown in Figure 5.

Figure 5



Results categorize and ranking advertisement claims

The results showed that Gain 1 ''*Clothing made from recycled polyester helps make a greener planet*'' was most often chosen to fit the gain category. In addition, out of the four times that this phrase was ranked within the gain category, it was ranked as best fitted phrase three times. Additionally, the Loss 2 ''*Clothing made from recycled polyester prevents pollution*'' and Loss 3 ''*Clothing made from recycled polyester prevents pollution*'' and Loss 3 ''*Clothing made from recycled polyester prevents climate change*'' were both most often chosen to fit the loss category. As both phrases were categorized as loss claims four out of five times, a distinction was made between the ranking of the two. As the phrases were ranked from 1 (best fitting) to 4 (least fitting), the lowest mean signified the best fitting phrase to the category. The claim Loss 2 had a ranking of 3 in the loss category. Loss 3 showed a ranking of 2.5 in the loss category. Therefore, results from the follow-up test showed that Gain 1 ''*Clothing made from recycled polyester helps make a greener planet*'' was the best fitting gain phrase and Loss 3 ''*Clothing made from recycled polyester helps make a greener planet*'' was the best fitting best fitting loss phrase.

Combining the results from the initial pre-test and the follow-up test, it is argued that Gain 1 is best fitting to use as a gain claim in the main test. First of all, the results of the follow-up test clearly implied Gain 1 to be the best fitting phrase. Secondly, even though it could be argued that means from other gain phrases showed better results than the means of Gain 1, these results were not significant whereas the follow-up test showed significant results towards Gain 1.

When looking at both results from the pre-test and the follow-up test for the Loss phrases, it is argued that Loss 2 is the best fitting phrase to use in the main survey. Even though Loss 1 appeared to be best in the pre-test, these results were not significant. In addition, the follow-up test showed a significant better score for Loss 2 and Loss 3. Despite Loss 3 being better ranked in the follow up test than Loss 2, Loss 3 did not show any significant results in the One Sample T-Test whereas Loss 2 did show significant results. Therefore, it was decided Loss 2 to be better fit as a loss claim.

Stimuli main research

Based on the results of the pre-test, four manipulations were created for the main study. The pre-test showed that visualisations natural 4 and raw material 1 were the best fit the main study. In addition, the phrases gain 1 and loss 2 were determined as best phrases for the advertisement claims in the main study. These stimuli were combined in the four final manipulations that would be used in the main test. Figure 6 shows these manipulations, which include: a natural visualisation & gain claim, a natural visualisation & loss claim, raw material visualisation & gain claim and lastly raw material & loss claim. The manipulations were designed to look like an Instagram advertisement of the clothing brand Truly Awear. Truly Awear is a fictional sustainable brand that was used in the main study. The online design program Canva, was used to create the Instagram mock-up advertisements. Each advertisement displayed sweaters made of recycled polyester. The background visualisation and phrases in the advertisement changed for each manipulation, however the sweaters stayed consistent and did not change.

Figure 6

Manipulations including stimuli of visualisation and message frames



perniliemschmidt en anderen vinden dit leuk TrulyAwear Stay warm and cosy in these beautiful knits made with recycled polyester. Recycled polyester saves n...meer

3. Raw visualisation & Gain frame

pernillemschmidt en anderen vinden dit leuk TrulyAwear Stay warm and cosy in these beautiful knits made with recycled polyester. Recycled polyester saves n...meer

4. Raw visualisation & Loss frame

Participants

Once the questionnaire for the main study was established, the process of gathering participants started. Other than an age minimum of 18 years old, there were no restrictions for participating in the survey. Therefore, it was chosen to gather participants using the non-probability sampling method 'convenience sampling' (Dudovskiy, n.d.). The survey was distributed online through WhatsApp and social media platforms such as LinkedIn, Instagram and Facebook (appendix IV). In addition, some participants were also asked to distribute the survey within their own network. In total, 154 respondents started the survey. However, it became apparent not all respondents completed the survey. In order to get clear results, it was decided to remove the participants that were not able to finish the survey from the data. In the end, the data of 123 participants was used in the analysis of the results.

Descriptive statistics

Using an SPSS analysis, the means of the general characteristics of the participants, such as age, gender and educational level, was calculated for each individual condition. Table 5 provides a clear overview of the results of age, gender and education level. As can be seen, the mean of the age for each condition is approximately the same as it ranges between 27 and 32 years (M=28,65, SD=13.55), (M=26.55, SD=11.45), (M=27.00, SD=11.65), (M=31.87, SD=12.74). An ANOVA analysis showed that there is no significant effect for age between the conditions [F(3, 116)=1.07, p=0.37], implying that the data is evenly distributed within the conditions with regards to the age of the respondents.

Moreover, when looking at the gender distribution within each condition, it is apparent that the percentage of females is higher than the percentage of males. However, this is expected as overall the number of female respondents is considerably higher than the number of male respondents. An ANOVA test did not show significant effects between the conditions, so the data with regards to gender is evenly distributed between the conditions [F(3,119)=1.48, p=0.23].

Lastly, the table displays the level of education. Overall, the distribution between levels of education appears to be similar within all conditions. Levels 1 until 4 represent less than half the respondents. The majority of the respondents are displayed in the highest three levels of education. An ANOVA test again showed no significant results between the conditions for education levels, hence it can be concluded that the data is evenly distributed with regards to the level of education of the participant [F(3,118)=0.49, p=0.69].

		<u>Gain Claim</u>	Loss Claim
Natural visualisation	Age ^{a)}	M = 28,65 / SD = 13,55	M = 26,55 / SD = 11,45
	Gender ^{b)}	Male 32%	Male 16%
		Female 68%	Female 84%
	Education level ^{c)}	1 7%	1 0%
		2 3%	2 3%
		3 10%	3 10%
		4 3%	4 8%
		5 33%	5 33%
		6 22%	6 23%
		7 22%	7 23%
Raw visualisation	Age ^{a)}	M = 27,00 / SD = 11,65	M = 31,87 / SD = 12,74
	Gender ^{b)}	Male 32%	Male 40%
		Female 68%	Female 60%
	Education level ^{c)}	1 7%	1 30%
		2 304	2 304
		2 370	2 3%
		5 10% 4 10%	5 5% 4 20%
		4 19%	4 30%
		5 19%	5 17%
		6 26%	6 14%
		7 1 (0 /	7 700/

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Distribution of sample characteristics

a) Mean + *SD of self-reported age*

b) Percentage division Male / Female

c) Percentage indicated level of education: 1) = High school graduate 7) = Master or doctorate level

Procedure

The questionnaire of the main survey was, similarly to the pre-test, constructed in Qualtrics Survey Software. Once participants clicked on the link of the study, they would be guided towards the first page of the survey including general information regarding the study. The main purpose of the study was explained as well as the fact that participation was fully anonymous and that participants are able to withdraw from this study. This first page functioned as an informed consent. A question at the end of the page was included to ensure participants read the information and agreed to participate in the survey. The first set of questions asked were demographic questions such as gender, age and educational level. Next, a set of questions were added to measure the attitude of participants towards sustainability in the clothing industry in general. Afterwards, it was tested whether the participants were familiar with recycled polyester. To ensure it was not too obvious yet what the survey was about, a couple of random questions were added as well.

Subsequently, the participants were asked to imagine they are scrolling through Instagram and came across the following advertisement. They were asked to look at the advertisement thoroughly before continuing with the questions. The participants were not able to go back and take a second look at the advertisement once they continued, in order to reduce analysation of the questions and the manipulation. The advertisement was then followed up with the main part of the study including four different sets of questions measuring brand attitude, perceived sustainability and purchase intention, perceived trust and online engagement with the advertisement.

The last part of the study consists of a repetition of the questions regarding sustainability in the clothing industry that were asked at the beginning before the participants viewed the manipulation. It was specifically decided to repeat these four questions in order to see whether the advertisement changed their attitude towards the clothing industry in general. Afterwards, the advertisement was shown once more and participants were asked to answer a set of questions that were part of the pre-test. To ensure more significant results in the main test, some questions were formulated differently so that it was clearer for the respondents as to what was exactly intended with the question. It should be noted that a randomization was added to all matrix questions so that the order of questions would not influence the outcome. Moreover, the four manipulations were equally distributed amongst the respondents in randomized order.

Measures

This research focuses on how visualisation and advertisement claims influence sustainable marketing advertisements. Different measures were added in the survey in order to evaluate if and to what extent different components are influenced by the independent variables. The measures include the dependent variables perceived attitude, purchase intention, perceived sustainability, trust, and social media engagement including likes, shares and follows. Moreover, questions measuring purchase intention and greenwashing were added as well. In addition, information regarding demographic variables of respondents were gathered, including age, educational level and gender. Lastly, the set of questions used in the pre-test were added to the main test as well, in order to measure whether the conditions were perceived by respondents how they were intended.

Attitude towards the brand

Perceived attitude towards the brand was measured with two sets of questions. One set included six statements which were measured using a 5-point bipolar rating scale. The introductory sentence that accompanied these statements is as follows ''After seeing this advertisement, I think this brand is...'', after which the participants filled out the bipolar rating scale. Four out of the six statements were gathered from a research done by Spears and Signh (2004) using their scale ''attitude towards brand''. This scale included statements such as ''Unpleasant/Pleasant'', ''Uninspiring/Inspiring'', ''Unappealing/Appealing'' and ''Bad/Good''. Because of the way the question was formulated in the survey compared to the research of Spears and Signh (2004), the wording of ''Bad/Good'' was changed to properly fit the questionnaire of the main study. Therefore, Bad/Good from the study of Spears and Signh

(2004) was changed to "Negative/Positive". The remaining two statements were gathered from the study of Appiah (2001); "Unfavourable/Favourable" and "Uninteresting/Interesting".

The second set of questions includes two additional items which the respondents were asked to answer by indicating how much they agree using a 5-point Likert scale ranging from completely disagree to completely agree. The items which the respondents had to rate are "This advertisement gives me a positive feeling" and "I feel reluctant towards this advertisement". A reliability analysis of the items that measure attitude towards brand showed that the items have a high reliability ($\alpha = 0.82$). However, it appeared that by removing the items "This advertisement gives me a positive feeling", "I feel reluctant towards this advertisement", "Unpleasant/Pleasant" and lastly "Negative/Positive" it was possible to increase the reliability to $\alpha = 0.89$.

Purchase intention

Purchase intention is measured with different questions throughout the survey. Firstly, respondents were asked to answer the question " How do you perceive the likelihood of you buying a product of this brand after seeing the advertisement?" using a bipolar matrix table "Unlikely/Likely", "Impossible/Possible", including four different items; "Uncertain/Certain", and "Absolutely not/Absolutely" (Spears & Signh, 2004). The bipolar matrix includes a five-point scale. Furthermore, two statements were added that respondents answered by indicating how much they agree using a five-point Likert scale ranging from completely disagree to completely agree. The statements are the following; 'I would intent to buy the clothes displayed in the advertisement" and "I would intent to buy clothes from this brand". A reliability analysis showed a high consistency within this scale $\alpha = .91$. However, by removing the item 'Uncertain/Certain'', the reliability was increased to $\alpha = .92$.

Perceived Sustainability

In order to measure perceived sustainability of the brand, a set of four statements was used. Participants were asked to indicate how much they agree with each statement using a five-point Likert scale ranging from completely disagree to completely agree. Questions from the research of Vos (n.d.) was used to create the statements. The items were slightly altered as the research of Vos presents the items as questions, whereas this study presents them as statements. Moreover, the questions were altered to fit the subject. Consequently, the following statements are used to measure perceived sustainability " The environmental impact of the clothes in the advertisement is high" and "The clothes in the advertisement are environmentally friendly". Two additional statements were added which are similar to the previous statements, however phrased differently; "Truly Awear is a sustainable brand" and "This clothing brand negatively impacts the environment". The reliability of this measure is low with a Cronbach's Alpha score of $\alpha = 0.54$. Nevertheless, it was decided to remove the item " The environmental impact of the clothes of the clothes in the advertisement is high" in order to increase the reliability ($\alpha = 0.70$).

Perceived trust towards the brand

Four statements were used in order to measure perceived trust towards the brand. Respondents were again asked to indicate how much they agree using a 5-point Likert scale ranging from

completely disagree to completely agree. The first statement ''I think Truly Awear is a trustworthy brand'' was gathered from the study of Lake, Carlson, Rose and Chlevin-Thiele (2019). The second statement ''I think I could rely on this brand to solve problems'', was gathered from the study of Delgado-Ballester, Munuera-Aleman and Yague-Guillen (2003). Two additional items were added which focus more specifically on trust in combination with the sustainable advertisement. These are ''I think the brand can be trusted to be as sustainable as it claims to be in the advertisement'' and ''because of its clear focus on sustainability, I think the brand can be trusted''. A reliability test was conducted and showed that these items measuring trust have a high reliability ($\alpha = 0.83$).

Online engagement

Social media engagement is measured using five statements which participants were asked to answer using a five-point Likert scale. In addition, some supplementary multiple-choice questions were asked regarding the participant's use of the social media platform Instagram. The first five statements were gathered from the research of Esmeijer (2020) and measure the online engagement with the advertisement. The statements are ''I would share this Instagram post'', ''I would follow this Instagram account'', ''I would like this Instagram post'', ''I would not leave a comment on this Instagram post'' and lastly ''I would unfollow this Instagram account''. The additional questions regarding the use of Instagram include ''Are you familiar with the social media platform Instagram'', ''Do you have an Instagram account'', ''How often do you use Instagram'', which can be answered by choosing one of the multiple choice options. A reliability test using the Cronbach's Alpha analysis showed a reliability of $\alpha = 0.76$. However, by removing the item ''I would like this Instagram post'' the Cronbach's Alpha was increased ($\alpha = 0.79$).

Greenwashing

A set of four questions asked twice during the survey, once before and once after viewing the advertisement, make up the questions that measure greenwashing. These questions focus specifically on the clothing industry instead of the clothing brand presented in the study. The questions measure whether the participants opinions regarding the clothing industry change during the study after viewing the advertisement. The statements are "I think the clothing industry greatly impacts the world", "I think the clothing industry participates in environmentally friendly behaviour", "I think sustainable fashion advertisements are misleading", and "I think the clothing industry overall is bad for the environment" which are all answered using a five-point Likert scale ranging from completely disagree to completely agree. A reliability test was conducted and showed that these items measuring trust have a mediocre reliability ($\alpha = 0.54$). However, after further consideration it was decided to only use the item "I think sustainable fashion advertisements are misleading" as it was the only item that hit greenwashing at its core.

Reliability & validity

Using the Cronbach's Alpha analysis, the reliability of the measures was determined. After optimizing the Cronbach's Alpha of the measures by removing some items, all measures had a CA of $\alpha = 0.70$ or higher.

After the reliability of all items was conducted, a factor analysis was performed to verify the scale construction of the main study. It determines whether the different items together measure what they were designed to measure. Moreover, it is tested that the items belonging in one group actually measure the same factor (Knekta, Runyon & Eddy, 2019). With the gathered data, the factor analysis showed six groups which explain 69.9% of the total variance. The rotated component matrix showed that by removing two items that measure attitude, it was possible for each item to measure the one group they were designed to measure, whilst the construct of attitude still had enough items left in the scale. A second Cronbach's Alpha analysis for attitude shows that the Cronbach's Alpha can be increased by removing a fourth item as well ($\alpha = 0.909$). Attitude would then still be measured with four items, which is enough to remove it. Moreover, as the Cronbach's Alpha of Greenwashing was not sufficient enough, it was decided to only use the item ''I think sustainable fashion advertisements of clothing brands are misleading'' to measure greenwashing, as this question approaches greenwashing at its core. One last factor analysis was performed after removing the items of greenwashing and attitude, resulting in a total variance explained of 72.5%.

Results

After distributing the online survey for the main study, the data is gathered and analysed. The following will provide an explanation of the manipulation check, as well as the hypothesis testing of the main effects, interaction effect and greenwashing effect.

Manipulation check

Visualisation

First, a manipulation check is performed to assess whether the different conditions including manipulations worked as initially intended, and therefore can be used for further analyses. An Independent Samples T-Test is used to check whether the visualisations are effective and represent what they were intended to represent. The t-test showed a significant difference in the scores for the natural (M=4.21, SD=0.49 & M=2.46, SD=1.07) compared to the raw material (M=2.32, SD=0.83 & M=3.46, SD=0.90) conditions; t(114)=11.26, p=0.00 & t(114)=-7.12, p=0.00. The manipulation of the stimuli in natural compared to raw material visualisation therefore proved to be successful.

In addition, all mean scores also significantly differed from the midpoint of the scale based on a One Sample T-test, testing against 3 as being the midpoint of the 5-point liker scale (p<0.05). This indicates that the raw material visualisation was perceived as raw material and the natural visualisation was perceived as nature.

Advertisement claims

The same manipulation check is also conducted for the independent variable advertisement claims. First, an Independent Samples T-Test was executed. The t-test did not show a significant difference in the scores for gain claim (M=4.43, SD=1.59) and loss claim (M=3.89, SD=1.61) conditions; t(114)=1.82, p=0.85. It cannot be implied that the participants could decipher between the gain claims and the loss claims in the different conditions. It should be noted that the mean of the gain claims is higher than the mean of 4 and the mean of the loss claim is lower than the mean of 4. This is the right direction of the scale, however because the results were insignificant, this could also be due to coincidence. In addition, a One Sample T-Test was also conducted for the advertisement claims, with a test value of 4 on a 7-point scale. The results showed significant results in the gain condition (M=4.43, SD=1.59), as the mean was significantly higher than the middle point of 4 in a 7-point scale; t(59)=2.14, p=0.04. However, results did not show a significant difference for the loss claim (M=3.89, SD=1.61) condition; t(55)= -0.50, p=0.62. Therefore, the loss condition did not work as intended.

In addition, the congruency and reliability of the manipulations is tested. This is done with a one-way ANOVA test. The results do not show significant differences between the conditions for realistic on visualisation [F(3, 112)=0.71, p=0.55], congruency on visualisation [F(3,112)=0.06, p=0.98] and realistic on advertisement claims [F(3, 112)=0.46, p=0.71]. This implies that all conditions were perceived similar with regards to congruency and realistic.

It can be concluded that the manipulations partially work, as natural visualisation, raw material visualisation and the gain claim showed significant results, however, the loss claim did not.

Hypothesis testing

Descriptive statistics

As it was established that the manipulation works partially, the next step is analysing the formulated hypothesis. First, the results presented in table 6 show a summary of the descriptive statistics of visualisation and advertisement claims on the dependent variables. A first glance at the main effects on visualisation shows that the total means of natural visualisation and raw material visualisation are close to one another. Therefore, it can be assumed that the effect of visualisation on the advertisement is not that strong. The dependent variable attitude towards the brand has a slightly higher mean for natural visualisation compared to raw material visualisation. However, generally the visualisation of raw material appears to have a more positive effect on the advertisement as purchase intention, perceived sustainability, trust towards the brand and online engagement have higher means in the conditions of raw materials. These results are contrary to what was expected, as it was assumed that natural visualisation would result in more positive outcomes compared to raw material visualisation.

When looking at the descriptive statistics for the advertisement claims, generally the total mean of the gain claim appears to be a little higher than the overall mean of the loss claim. This is in line with what was expected. All dependent variables show a slightly higher mean in the conditions of the gain claims compared to the conditions of the loss claims. However, the table shows that the means of the gain claims and the loss claims are all close together as well as close to the middle point of 3 on a five-point Likert scale. Therefore, it can also be assumed that the advertisement claim does not have a strong effect on the dependent variables.

Table 6

Descriptive statistics of the dependent variables

	<u>Gain Claim</u>		Loss	Loss Claim		Total Visualisation	
	Μ	SD	М	SD			
Natural Visualisation							
``````````````````````````````````````							
Attitude towards brand ^a	3,53	0,89	3,53	0,94	3,53	0,92	
Purchase Intention ^{a)}	3,03	0,95	3,03	0,93	3,03	0,94	
Perceived Sustainability ^{a)}	3,58	0,66	3,50	0,50	3,54	0,58	
Trust towards brand ^{a)}	2,98	0,71	2,88	0,75	2,93	0,73	
Online Engagement ^{a)}	2,55	0,90	2,56	0,73	2,56	0,82	
Raw Visualisation							
Attitude towards brand ^{a)}	3,48	0,89	3,28	0,91	3,38	0,90	
Purchase Intention ^{a)}	3,28	0,78	2,99	0,93	3,14	0,86	
Perceived Sustainability ^{a)}	3,84	0,43	3,71	0,60	3,76	0,52	
Trust towards brand ^{a)}	3,31	0,66	2,92	0,67	3,12	0,67	
Online Engagement ^{a)}	2,83	0,81	2,39	0,90	2,61	0,86	
Total claims							
Attitude towards brand ^{a)}	3,51	0,89	3,41	0,93			
Purchase Intention ^{a)}	3,16	0,87	3,01	0,93			
Perceived Sustainability ^{a)}	3,71	0,55	3,61	0,55			
Trust towards brand ^{a)}	3,15	0,69	2,90	0,71			
Online Engagement ^a	2,69	0,86	2,48	0,82			
a) 5-point Likert scale (1=com	oletelv disa	gree / 5=con	nletelv agree	1			

# Main effects

As the descriptive statistics of natural and raw material visualisation and the gain and loss claim are all really close together, it has to be tested whether these differences are significant. Hence, a MANOVA test was conducted. The results are summarized in table 7. The Wilk's Lambda is used to measure the general effects between the independent variables and the dependent variables.

# Table 7

Multivariate test for variance (GLM / MANOVA)

Multivariate tests (Manova)	<i>F-value</i>	Sig.
Wilk's Lambda		
Visualisation	1,69	0,13
Advertisement claims	0,85	0,53
Visualisation * Advertisement claims	0,50	0,81

Test of between subjects design effects (Anova)	F-value	Sig.
Visualisation		
Attitude towards brand ^{a)}	0,74	0,38
Purchase Intention ^{a)}	0,43	0,51
Perceived Sustainability ^{a)}	5,74	0,02
Trust towards brand ^{a)}	2,11	0,15
Online Engagement ^{a))}	0,15	0,70
Advertisement claims		
Attitude towards brand ^{a)}	0,31	0,58
Purchase Intention ^{a)}	0,75	0,39
Perceived Sustainability ^{a)}	0,60	0,44
Trust towards brand ^{a)}	3,10	0,08
Online Engagement ^{a))}	1,75	0,19
Visualisation * Advertisement claims		
Attitude towards brand ^{a)}	0,39	0,53
Purchase Intention ^{a)}	0,86	0,35
Perceived Sustainability ^{a)}	0,15	0,69
Trust towards brand ^{a)}	1,54	0,22
Online Engagement ^{a)}	2,33	0,13
a) 5-point Likert scale (1=completely disagree / 5=completely	y agree)	

The first part of table 7 shows, no main effect of Visualisation present on the dependent variables [F(6, 112)=1.69, p=0.13]. The advertisement including natural visualisation (M=3.12, SD=0.79) did not positively influence the advertisement compared to the advertisements including raw material visualisation (M=3.21, SD=0.77).

The main effect of Visualisation on attitude towards brand [F(1, 112)=0.31, p=0.58], purchase intention [F(1, 112)=0.43, p=0.51], trust towards the brand [F(1, 112)=2.11, p=0.15], and lastly online engagement [F(1, 112)=1.75, p=0.19] is not significant. There is a significant effect in the main effect of Visualisation on perceived sustainability [F(1, 112)=5.73, p=0.02]. The use of natural visualisation in a sustainable marketing advertisement (M=3.54, SD=0.58)

leads to a lower perceived sustainability than the use of raw material visualisation in an advertisement (M=3.78, SD=0.52). Hypothesis H1 is rejected.

In order to see whether the means of the claims show significant results, a MANOVA test was also performed for advertisement claims (Table 7). The Wilk's Lambda does not show a significant main effect of the advertisement claims on the dependent variables combined [F(6, 112)=0.85, p=0.53]. The use of a gain claim does not positively influence the online sustainable marketing advertisement compared to the use of a loss claim.

The main effect of advertisement claim on attitude towards brand [F(1, 112)=0.31, p=0.58], purchase intention [F(1, 112)=0.75, p=0.39], perceived sustainability [F(1, 112)=0.60, p=0.44], trust towards brand [F(1, 112)=3.10, p=0.08] and lastly online engagement [F(1, 112)=1.75, p=0.19] is not significant. However, it can be said that trust shows a trend towards significance, in which the use of a gain claim (M=3.15, SD=0.69) results in higher trust towards the brand compared to the use of a loss claim (M=2.90, SD=0.71). As a result, hypothesis H2 is rejected.

# Interaction effects visualisation and advertisement claims

To see whether there is a significant interaction effect of visualisation and advertisement claims on the dependent variables, a MANOVA analysis is conducted (Table 7). The Wilk's Lambda shows the interaction effect is not significant [F(6, 112)=0.50, p=0.81). The use of natural visualisation in combination with a gain claim does not positively influence the online sustainable marketing advertisement compared to the use of raw material visualisation in combination with a loss claim.

Table 7 shows there is no significant interaction effect of Visualisation and Advertisement claims on attitude towards the brand [F(1, 112)=0.39, p=0.53], purchase intention [F(1, 112)=0.86, p=0.35], perceived sustainability [F(1, 112)=0.16, p=0.69], trust towards the brand [F(1, 112)=1.56, p=0.22], and lastly online engagement [F(1, 112)=2.33, p=0.13]. As a result, hypothesis H3 is rejected.

# Greenwashing effects

Greenwashing was measured by indicating how misleading the respondents perceive sustainable marketing advertisements before viewing the advertisement as well as after viewing the advertisement. Table 8 summarizes the means and standard deviations of perceived greenwashing for each mock-up advertisement before the advertisement was shown and after the advertisement was shown. Interesting to see is that, in total, consumers perceive the clothing industry as less misleading after viewing the advertisements (M=0.16, SD=0.88). Thus, the greenwashing effect is lower after the advertisement is shown. Moreover, the strongest effect is perceived for the condition including raw material visualisation and a gain claim (M=0.33, SD=0.96). Lastly, a slightly negative greenwashing effect occurs for the advertisement including a natural visualisation and a gain claim as consumers perceive the clothing industry as more misleading after viewing the advertisement (M=-0.03, SD=0.95). This is in line with what was expected. However, as all means appear to be close to one another, it is not expected that visualisation and the advertisement claim have a strong influence on perceived greenwashing.

## Table 8

Summary greenwashing mean (M) and standard deviation (SD) for each advertisement

	<u>Before advertisement</u>		<u>After advertisement</u>		<u>Difference</u>	
					<u>greenwashing</u>	
	M ^{e)}	SD	M ^{e)}	SD	$\mathbf{M}^{\mathrm{f}}$	SD
Condition 1 ^{a)}	3.23	0.72	3.26	0.82	-0.03	0.95
Condition 2 ^{b)}	3.48	1.00	3.17	0.87	0.19	0.70
Condition 3 ^{c)}	3.32	0.79	3.13	0.85	0.33	0.96
Condition 4 ^{d)}	3.40	0.66	3.23	0.90	0.17	0.91
Total	3.36	0.80	3.20	0.85	0.16	0.88

a) Natural visualisation & Gain claim

b) Natural visualisation & Loss claim

c) Raw material visualisation & Gain claim

d) Raw material visualisation & Loss claim

e) 5-point Likert scale (1=completely disagree / 5=completely agree)

f) Scale ranging from -5 until 5 (M before advertisement – M after advertisement)

A One Sample T-Test was performed to see whether the mean difference was significantly different from the middle point of 0 (M=0.16, SD=0.88). The result is significant t(121)=2.05, p=0.04. In addition, an Independent Samples T-Test was performed. There was no significant effect for visualisation on greenwashing t(120)=-0.20, p=0.84. In addition, no significant effect was found for advertisement claim on greenwashing t(120)=-1.06, p=0.29.

Additionally, an ANOVA test was conducted to analyse the effects of visualisation, advertisement claims and the interaction effect of visualisation and advertisement claims on greenwashing. The results are summarized in table 9. As can be seen, the effect of Visualisation on greenwashing is not significant [F(1, 112)=0.05, p=0.83]. The use of natural visualisation (M=0.15, SD=0.96) in a online sustainable marketing advertisement of a clothing brand does not result in higher perceived greenwashing compared to the use of raw material visualisation (M=0.18, SD=0.81). As a result, hypothesis H4 is rejected.

The effect of advertisement claims on greenwashing is also not significant [F(1, 112)=0.28, p=0.60]. The use of a gain claim in a sustainable marketing advertisement (M=0.08, SD=0.84) compared to the use of a loss claim in a sustainable marketing advertisement (M=0.25, SD=0.93) does not result in higher perceived greenwashing. As a result, hypothesis H5 is rejected.

Lastly, the interaction effect of visualisation and advertisement claim on greenwashing is not significant [F(1, 112)=1.04, p=0.31]. The use of natural visualisation in combination with a gain claim does not result in higher perceived greenwashing compared to the use of raw material visualisation in combination with a loss claim. Therefore, hypothesis H6 is rejected.

# Table 9

ANOVA results greenwashing

Test of between subjects design effects g	F-value	Sig.			
Visualisation					
	Greenwashing ^{a)}	0,05	0,83		
Advertisement claims					
	Greenwashing ^{a)}	0,28	0,60		
Visualisation * Advertisement claims					
	Greenwashing ^{a)}	1,04	0,31		
a) Total Mean before seeing advertisement – Total Mean after seeing advertisement					

# **Discussion and Conclusion**

The following will discuss the results and main findings that were found in this research. Moreover, some implications concerning academic and practical aspects are discussed, as well as some of the limitations that were encountered during the research. This is followed up by recommendations for future research. Lastly, a conclusion of all the main findings will wrap up this research.

# Discussion of the findings

The main aim of this study was to explore to what extent visualisation and advertisement claims influence how consumers perceive sustainable marketing advertisements on Instagram, specifically with regards to attitude, purchase intention, perceived sustainability, trust and online engagement. In addition, it was also explored whether and how visualisation and advertisement claims in sustainable marketing advertisements on Instagram influence greenwashing.

#### Visualisation

First of all, the findings of the independent variable visualisation on the dependent variables will be focussed on. As the Manova results showed, there is no significant main effect of visualisation on the dependent variables. This result is contrary to what was expected in the hypothesis. The Anova results, however, did show an effect of visualization on perceived sustainability. No effects were found of visualisation on attitude towards the brand, purchase intention, trust towards the brand and online engagement.

Even though literature regarding visualisation in social media advertisements is limited, Wilson et al. (2016), did explain that the use of visualisation has a persuasive aspect as it is possible to prompt and nudge people towards certain behaviour by means of visualisation. In addition, Yelder (n.d.) discusses that a green colour aids in the communication of sustainable aspects, as green is highly associated with environmental friendliness. However, Yelder (n.d.) also explains that this theory is not applicable when consumers are sceptic. These findings led to the formulation of the hypothesis predicting that the use of natural visualisation will positively influence the dependent variables compared to the use of raw materials in the visualisation. However, the results showed that, contrary to what was expected, the natural visualisation did not have a more positive main effect on the dependent variables. The type of visualisation did not persuade the receiver of the advertisement, nor did the use of green colour aid in the communication of sustainability. Rather the opposite tends to be right as the raw material visualisation resulted in higher perceived sustainability than natural visualisation. An explanation for this could be that consumers were sceptical.

A different explanation for the non-significant results could refer back to the results of the pre-test. The natural visualisation chosen in the pre-test was not an ideal representation of natural elements, as congruency did not show significant results. This implies that both natural elements as well as raw material were perceived in the image. As the image is supposed to be a visualisation of natural elements, this is not an ideal as the natural visualisation is not a perfect representation. Therefore, all results and conclusions in the main test using the natural visualisation have to be carefully formulated as the visualisation does not represent an ideal image of natural elements. This could have influenced the results in the main test and might explain why they are not as expected. However, a more likely explanation can be found in the theory of congruency.

McKay-Nesbitt and Yoon (2015) explain the importance of congruency for the effectiveness of the marketing message, as it increases the persuasive elements of the advertisement. As the clothing displayed in the sustainable marketing advertisement is made out of recycled polyester, the raw material of the clothing is actually plastic. This is viewed a more sustainable alternative in the fast fashion industry, however, the natural elements shown in the natural visualisation do not fully match with this material. The sustainable marketing advertisements that show raw material visualisation are more congruent with the clothing displayed than the advertisements that show the natural elements. It is explained that congruency in marketing increases the effectiveness of the message.

This explanation would also be in line with the significant result that was found of raw material visualisation on perceived sustainability. The respondents were able to recognize the raw material visualisation as more sustainable compared to the natural visualisation. Nevertheless, it also appears that the effect of congruency in the advertisement visual is not strong enough to have had an impact on the other dependent variables to show significant results. As perceived sustainability was the only significant effect with regards to visualisation, it could be argued that raw material visualisation in a sustainable marketing advertisement on Instagram visualizes and communicates that the brand participates in environmentally friendly behaviour, however, will not result in more sales.

Lastly, the online engagement with the post could provide an explanation as to why no significant results were found. Malthouse et al (2013) explains that consumers experiencing a low level of engagement have different behaviour than consumers experiencing a high level of engagement. This knowledge, in combination with the theory of Cheng, Woon and Lynes (2011) explaining that the effectiveness of message frames is also influenced by the engagement of consumers, could demonstrate that participants had low level of engagement regarding this topic, which influences the results. As the effect of online engagement was insignificant as visualisation did not influence online engagement of consumers with the advertisement. Interestingly, compared to the other dependent variables, online engagement scored lowest for all conditions. The online engagement with the post is below average, therefore the consumers are not engaged with the post. If this is taken more broadly, it could refer back to low engagement with the topic in general, as well as with the brand Truly Awear. Consumers might not feel a connection with sustainable clothing and, therefore, not have strong opinions towards it.

#### Advertisement claims

Contrary to the hypothesized effects regarding the claims, there are no significant results supporting that the use of claims influences the dependent variables. Thus, findings show that a gain claim does not positively influence attitude towards the brand, purchase intention, perceived sustainability, trust towards the brand and online engagement compared to the use of a loss claim.

Tversky and Kahneman (1981) explain that the use of frames can influence and change people their opinions and behaviour towards topics. In addition, their theory generally explains that the use of a loss frame generates stronger responses from the receivers than the use of a gain frame. Cheng, Woon and Lynes (2011) state that specifically for communicating environmental issues, generally loss frames would be more effective. However, with regards to marketing, Guedes, Paillard-Bardey and Schat (2020) explain that gain frames appear to be preferred. Nevertheless, the results of this study do not support these theories, as neither the gain claim nor the loss claim influenced attitude towards the brand, purchase intention, perceived sustainability, trust towards the brand and online engagement. Nevertheless, it should be noted that the use of the gain claim resulted in means higher than the middle point of 3 and the loss claim resulted in means lower than the middle point of 3. Therefore, the results of the advertisement claim did steer in the direction they were expected to steer towards. Nevertheless, neither the gain claim nor the loss claim significantly influenced the dependent variables when used in the sustainable marketing advertisement on Instagram.

The claims used in the advertisement, specifically the loss claim did not elicit the expected reaction. It is unclear as to why this claim did work as intended. However, the formulation of the loss claim could provide a reason to this effect. The pre-test, as well as the manipulation check of the advertisement claims showed that participants struggled to recognize the loss claim. When looking at the results (table 6), it can be seen that the means of the gain claim for each dependent variable is a little higher than the means of the loss claim. If the loss claim was clearer formulated, this could have resulted in stronger differences in the means and therefore might ensure significant outcomes.

Moreover, the non-significant results could be explained by the fact that there are multiple elements influencing the effectiveness of frames. These elements are risk (Tversky & Kahneman, 1981), uncertainty (Morton et al., 2011) and promotion or prevention focused attitude (Bertolli & Catellani, 2014). Specifically, environmental issues in combination with risk is complex, as people often do not perceive climate changes and environmental issues to be a risk to them (Bertolli & Catellani, 2014). Therefore, gain and loss claims might not show strong results in combination with the environment, resulting in findings that are not significant.

Another explanation as to why the results turned out to be insignificant could be lack of research towards the use of message frames in combination with marketing communication. Generally, gain claims are used by the marketeers as this is a safe option (Pervan & Vocino, 2008). However, it is explained by Pervan and Vocino (2008) that it is still unclear whether the use of a gain claim in marketing actually would lead to more positive results compared to the use of a loss claim. The results from this study are in line with this explanation Pervan and Vocino (2008) as the results of this study are non-significant and the gain claim in sustainable marketing advertisement did not positively influence attitude towards the brand, purchase intention, perceived sustainability, trust towards the brand and online engagement.

A final explanation for the lack of significant results of advertisement claims on the advertisement could be related to the online engagement. Similarly to visualisation, the influence of advertisement claims on online engagement was not significant. As Malthouse et al (2013) and Cheng, Woon and Lynes (2011) explain, the level of engagement consumers feel towards a post can influence the behaviour of consumers and the opinions consumers have towards it. As the level of engagement in general was relatively low, it could be argued that consumers did not feel connected to the product or the brand in the advertisement and therefore are not affected by independent variables such as advertisement claims and visualisation.

# Interaction effects

Manova shows no effect of visualisation and advertisement claims on the dependent variables. This is not in line with the formulated hypothesis, which expected that there would be an interaction effect between natural visualisation and a gain claim as they were both predicted to have positive effects on the dependent variables. The hypothesis is not supported by this research. Natural visualisation in combination with a gain claim does not lead to more positive attitude towards the brand, purchase intention, perceived sustainability, trust towards the brand, and online engagement compared to the use of raw material visualisation in combination with a loss claim. This can be explained by the fact that both visualisation and advertisement claims did not show significant main effects on the dependent variables.

# Greenwashing effects

The main effects of visualisation and advertisement claims do not have a significant effect on greenwashing. This is in contradiction with the formulated hypotheses. The results showed that there is a difference in means for perceived greenwashing regarding the clothing industry before viewing the advertisement and greenwashing after viewing the advertisement. In general, people perceive the clothing industry as less misleading after viewing the advertisement, implying that the advertisement influences how consumers look towards the industry. However, the difference between the conditions is not significant, which means that the visualisation and advertisement claims do not significantly influence perceived greenwashing. It is interesting to note that the condition including a raw material visualisation and a gain claim had the strongest effect, therefore participants were most influenced by and perceived the industry as less misleading with that specific advertisement. Moreover, it is recalled that research by Kahraman and Kazançoglu (2019) showed that visual elements such as "plant and fruit images" (p.1222) can aid in the greenwashing effect. However, this did not necessarily appear to be the case regarding this research. After viewing the advertisement including natural visualisation, participants did not significantly perceive a higher greenwashing effect compared to the raw material visualisation that was shown in the advertisement.

An explanation for the non-significant results regarding greenwashing could be found in the theory of green highlighting. Walker and Wan (2012) explain that green highlighting includes communication about past and present actions with regards to sustainability in combination with communication about future plans reduces greenwashing. However, as it is a fictive brand, consumers do not know about past or current actions of sustainability. It was assumed that the fact that it is presented as a sustainable brand would provide enough information in that regard, however, this cannot be sure. Because there was a lack in green highlighting, this could explain the non-significant results. In addition, Niinimäki (2015) explains that sustainability needs to be part of the strategy of the organization. Similarly, because this is a fictive brand, there is lack of information towards the participants regarding the strategy of the brand. The advertisement did influence the perceived greenwashing of the clothing industry, however, it cannot be concluded that this is because of visualisation or advertisement claims. Nevertheless, this information could be valuable as it provides a way to reduce greenwashing.

# Academic and practical implications

This study aids the academic field as it broadens the knowledge and literature available concerning online sustainable marketing advertisements and more specifically, the influence that visualisation and advertisement claims has within online advertisements on consumers. This research ads to this by providing both fields with new insights. Nevertheless, it should also be noted that further research elaborating on these new insights are necessary in order to further explore these results.

Contrary to what was expected based on previous research, there were no main effects found between visualisation, advertisement claims and the interaction between them in sustainable marketing advertisements that positively influences attitude towards brand, purchase intention, perceived sustainability, trust towards brand and online engagement.

In addition, there are no significant main effects of the independent variables on greenwashing. However, an interesting finding showed that the advertisements in general aided in the reduction of perceived greenwashing of consumers towards the clothing industry. This can be viewed as an important finding that ads new insights to the research and literature available concerning greenwashing. However, it is important that this effect is further explained by means of further research elaborating on this finding.

Lastly, findings provide new insights regarding the communication of sustainability using visuals, as it contradicts theories explaining that green and natural elements increase the communication of sustainability because the elements are associated with environmental friendliness. In fact, a link was found between visualisation and perceived sustainability, as the use of raw material visualisation in the advertisement increased perceived sustainability. As this is a contradictory outcome, it is of added value that further research elaborates on this aspect trying to find the reason behind this conclusion.

The findings of this research can be practically applied, especially by marketeers. The findings show that sustainability can be communicated with images. Visualisations of natural elements do not necessarily increase perceived sustainability, however this research showed that raw material elements of recycled polyester do in fact increase perceived sustainability. This does not directly lead to increase of sales, however, it does successfully convey the message. Moreover, as a marketeer trying to market sustainable products such as clothes, the knowledge that visualisation and advertisement claims does not necessarily positively influence consumers can be of added value. Because the findings of this research are not common with regards to marketing sustainable products, it could influence and maybe change the way marketeers are thinking about and work with sustainable communication.

On another note, as there was no main effect found for both advertisement visualisation and advertisement claims as well as the interaction effect between the two, it could be questioned whether sustainability should be incorporated in the marketing strategy. For some organizations, it might be more effective to communicate sustainability by means of the corporate communication if the right audience is reached through these channels.

# Limitations

Several limitations can be addressed regarding this study. First and foremost, it should be acknowledged that the stimuli used in the manipulations are not perfect representations of the visualisations and advertisement claims. Results of the pre-test showed that the respondents also observed elements of raw material in the natural visualisation. Therefore, the stimuli of natural visualisation is not a perfect representation of natural elements. This has two important consequences. Firstly, because the visualisation is not a perfect representation, this could have altered the responses of the participants. Therefore, the results could turn out different when using a different image that perfectly represent the natural elements. Secondly, the results of natural visualisation can be used to make conclusions, however, these conclusions should be formulated with care as they are based on non-perfect conditions. For future research, it is recommended to use an image that perfectly represents the natural elements to eliminate the altered responses and see how this influences the results and conclusions.

Similarly, the stimulus of the loss claim is also not a perfect representation of a loss frame. The results of the main test showed that the manipulation of advertisement claims did not fully work as indented. More in-depth information showed that this is mainly because of the formulation of the loss claim. Respondents were not able to identify the message frame as a loss claim. Similar to the natural visualisation, the results of the conditions including the loss claim can be different when using a better formulated claim. This could have an effect on the results and might even generate some significant results. Moreover, conclusions made using the loss claim should be carefully formulated as the claim did not perfectly represent a loss frame. As for future research, using an advertisement claim with a clear loss frame could have a different effect on the results.

Another limitation of this study can be found in the connection respondents have with the brand in the survey. As the brand Truly Awear is a fictional brand, it can be expected that respondents are not as engaged with the study. This became visible after the dependent variable 'online engagement' had relatively low results compared to the other variables. The use of a non-fictional brand might lead to the respondents feeling more connected and, therefore, could influence the results of visualisation and advertisement claims, not only of online engagement, but might also influence the results for attitude towards the brand, purchase intention, perceived sustainability, trust towards the brand and greenwashing.

Lastly, the clothes displayed in all manipulations are originally female clothes. Close attention was paid to the neutral colours of the clothes. In addition, as the clothes are folded, preferences in clothing style are also reduced. However, the fact remains that the clothes are female clothes and male respondents might not have a strong of a connection with the clothes as the female respondents. It would be advised to make a distinction between male participants and female participants and display the advertisement with male clothing to the males and the advertisement with female clothing to the females.

# Future research

As the effect of visualisation on perceived sustainability is significant, it could be interesting to further elaborate on this by exploring why this is the case. For instance, qualitative research could provide more in-depth answers explaining this. This could especially be important as it

is at present common to communicate sustainability through visuals by using natural and green elements, especially in a marketing perspective (Yelder, n.d.). However, this research showed that a less 'perfect' image including raw materials might be better to convey the message. As this is not common, future research focussing on elaborating on this finding could provide new insights in sustainable marketing perspectives.

The main effect of visualisation in a sustainable marketing advertisement appeared to be insignificant. Nevertheless, future research might focus on different ways in which visualisation can successfully play a part in conveying the message as sustainable marketing on online platforms increases. For example, previous research has shown that videos generate more engagement than the use of images on Instagram, as well as it ensures that the post stands out more in the feed (Ray, 2020). However, at the moment not even 20% of the posts on Instagram consist of video's (Ray, 2020). This implies that opportunities lie in the use of video's in online sustainable marketing advertisements positively influence the dependent variables compared to the use of images.

In addition, the main effect of advertisement claims in a sustainable marketing advertisement also proved to be non-significant. As this result was contradictory to what was expected, future research want to research different ways in which the textual elements can influence online sustainable marketing advertisements. For example, past research has proved the important role the source of the message can play, specifically for the credibility and persuasiveness towards the message (Clark & Evans, 2014). However, as this theory does not appear to be studied often in combination with online sustainable marketing advertisements, it could be interesting to research how the source of the message in sustainable marketing influences the credibility and persuasiveness of the add.

Lastly, visualisation and advertisement claims proved to not have an effect towards greenwashing. Nevertheless, this study showed a promising result with regards to greenwashing, as it appears that the advertisement in itself influenced how respondents perceived greenwashing. More specifically, the advertisement caused a reduction in the effect of greenwashing. However, it is still unclear what caused this reduction as there was no effect of visualisation and advertisement claims found on greenwashing. It is important that further research elaborates on this finding, as it will add to the knowledge that is available nowadays regarding greenwashing. As there currently appears to be limited literature available regarding the reduction of perceived greenwashing or scepticism of consumers in online sustainable marketing advertisements, it could be interesting to research what specific elements in online sustainable marketing advertisements could aid in this reduction.

# Conclusion

The aim of this study was to elaborate how visualisation and advertisement claims influences online sustainable marketing advertisements. More specifically, this research discovered what the effects of visualisation and advertisement claims in an online sustainable marketing advertisement for a clothing brand are on attitude towards the brand, the purchase intention, perceived sustainability, trust towards the brand, online engagement and lastly greenwashing. This study provides a theoretical framework which addresses the use of visualisation in online

sustainable marketing advertisements, as well as the use of claims in online sustainable marketing advertisements. A 2 x 2 experimental research design was constructed, consisting of natural visualisation and raw material visualisation, as well as a gain claim and a loss claim. Four conditions resulted from this experimental design, which were implemented by means of mock-up online sustainable marketing Instagram advertisement.

The findings show that visualisation, advertisement claims and an interaction do not have an effect on how consumers perceive the advertisement. Nevertheless, it appeared that raw material visualisation does positively influence perceived sustainability. Thus, the use of raw material in advertisements increases how sustainable consumers perceive the brand to be compared to using natural visualisation. This is a contradicting, but nevertheless important, finding that adds new knowledge and can aid marketeers that are interested in conveying sustainable messages through visuals. In addition, another contradicting finding showed that perceived greenwashing was reduced after viewing the advertisement. Thus, the advertisement influenced consumers and caused a reduction in perceived greenwashing. However, visualisation and advertisement claims did not have an effect on this reduction. Future studies might elaborate on what elements in the advertisement cause this reduction in perceived greenwashing.

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# Appendices

# Appendix I: preliminary study communication sustainability

Different brands were analysed on their sustainability communication. Below you find an overview. After gathering material from 10 different brands, which include both "regular" brands and sustainable brands, a summary on the different elements of their sustainability communication was provided.

# **Examples Brands Sustainability**

See PowerPoint for the visual examples

# America Today:

- Recycled clothes
  - Visible on website in text
  - Visible in store on green label

# H&M:

- H&M Conscious Exclusive Collection
- Visible on social media and website
  - o Green background of text in Instagram story
  - o Images show plants and nature
  - Images also 'regular''
  - Visible in store with green label
  - o Sustainability symbols/emoji's in text

# Scoon:

- Sustainable brand
  - Inform on sustainability on platform
    - Natural images & colours
    - Not necessarily green
    - Text in post

# MINI:

- MINI Electric
- Communication focused on driving experience and not on sustainability
  - o Images of MINI Electric in line with corporate identity
  - Some images shot in nature but most are not
  - Not visible sustainable

# Tesla:

- Limited communication about sustainability on Instagram and website
  - Sustainability communication focussed on solar panels and wind turbines
    - Images of solar panels/wind turbines show nature and green
    - Text mostly focused on purchase and experience and not on sustainability

# Hello Fresh:

- Communication posts recognizable because of green colour/use of plants in background
  - Green colour/plants
  - Informal text used to inform

- Text in post
- Use sustainability symbols/emoji's in text (a lot)

Organic Hair by ZENZ (Enschede):

- Information about sustainability on website
- Not visible on Instagram
- Visible in store because of banner outside
  - Text on website
  - Photo on website with plants
  - Banner with green and plants

Dille & Kamille:

- Natural brand
  - Communication about sustainability on website and Instagram
    - Natural products and plants visible in sustainability posts
    - Use a lot of green and natural colours
    - o Inform with text

Plantage Rococo

- Not a lot of information on sustainability
- Instagram and website in general show a lot of green and nature

# Vero Moda:

- AWARE Collection
- Communication on Instagram and website about their AWARE collection
  - o Natural/nude colours and natural elements in images
  - Do not use a lot of green
  - In their campaign for AWARE collection, symbols are used to communicate sustainability
  - Also use ''regular'' pictures to showcase their AWARE collection

# The following elements of were discovered:

- Visual:
  - Overall colours: Green & Natural colours
  - o Background incorporates plants and nature
  - o Natural elements such as wood and textile
- Textual:
  - o Symbols & Emoji's
  - Both short clear texts as well as longer informative texts
  - Both texts focused on user experience and product (MINI & Tesla) as well as text informing about sustainability (Hello Fresh & Dille&Kamille)

# Appendix II: Stimuli visualisation



Natural 1



Natural 3



Raw material 1



Raw material 3



Natural 2



Natural 4



Raw material 2



Raw material 4

# Appendix III: Pre-test survey

# Introduction

Dear participant,

Thank you for participating in this research as part of my Bachelor Thesis. This survey will be used as a pre-test in the Thesis.

This survey will consist of two different parts. The first part will include 8 different images. You will be asked to answer questions for every image shown. The second part will contain 8 different phrases. You will again be asked to answer some questions regarding each phrase.

Overall, this survey will approximately take between 5 and 10 minutes. Afterwards, the results of this survey will be analysed. All information will be completely anonymous.

If you continue with the survey, you agree to have read the information above and to participate in the pre-test. Participation is voluntarily and you can leave this survey at any moment.

Thank you for your time. Kind regards,

Pien van Dalen Communication Science student University of Twente j.h.vandalen-1@student.utwente.nl

Active consent

I have read above information and agree to participate

What	is	your	gender?
------	----	------	---------

⊖ Male

○ Female

 $\bigcirc\;$  I don't want to disclose

What is your age?

# Part 1

This first part of the pre-test will contain 8 images. You will be asked to answer questions after every image shown. The images show clothes made from recycled polyester. Look at each image thoroughly before answering the questions.



# Questions

	Completely disagree	Disagree	Neutral	Agree	Completely Agree
I seems realistic if this image is used as an advertisement for a clothing brand	0	0	0	0	0
This image is congruent with recycled polyester, which is the material of which the clothes are made out of	0	0	0	0	0
The background of the image contains elements of nature	0	0	0	0	0
The background of the image contains materials out of which recycled polyester is made	0	0	0	0	0

# Part 2

This second and last part of the pre-test will contain 8 phrases. You will be asked to answer some questions after every phrase shown. Read each phrase thoroughly before answering the questions.

- Gain 1 Clothing made from recycled polyester helps make a greener planet
- Gain 2 Clothing made from recycled polyester will create a better world
- Gain 3 Clothing made from recycled polyester helps make this planet a better place
- Gain 4 Clothing made from recycled polyester creates a green wardrobe
- Loss 1 Clothing made from recycled polyester reduces plastic waste
- Loss 2 Clothing made from recycled polyester prevents pollution
- Loss 3 Clothing made from recycled polyester prevents climate change

Questions

	Completely disagree	Disagree	Neutral	Agree	Completely Agree
It seems realistic if this phrase is used in an advertisement for a clothing brand.	0	0	0	0	0
This phrase ensures a better world	0	0	0	0	$\bigcirc$
This phrase prevents the world from becoming worse	0	0	0	0	0

We thank you for your time spent taking this survey. Your response has been recorded.

# Appendix IV: Main survey

Dear participant,

Thank you for participating in this research as part of my Bachelor Communication Science. You will be participating in an online survey in which questions regarding online Instagram advertisements are formulated. The main purpose of this study is to gather information about how consumers perceive Instagram advertisements.

Overall, this survey will take approximately 10 to 15 minutes and participation will be fully anonymous. Participation is voluntarily and you are able to withdraw from this study at any moment. Feel free to contact me if you have any further questions regarding this research.

Thank you for your time. Kind regards,

Pien van Dalen Communication Science student University of Twente j.h.vandalen-1@student.utwente.nl

I have read the information and agree to participate

○ Yes

What is your gender?

○ Male

○ Female

 $\bigcirc$  I do not want to disclose

Indicate the level of education you have completed or you are currently running by using the scale below.



57

	Completely disagree	Disagree	Neutral	Agree	Completely agree
I am conscious about my shopping behaviour with regards to the environment	0	0	0	0	0
I like shopping	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I am willing to buy sustainable fashion items	0	0	0	0	0
I think the clothing industry greatly impacts the world	0	0	0	0	0
I think the clothing industry participates in environmentally friendly behaviour	0	0	0	0	0
I shop online	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I enjoy using Instagram	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I think sustainable fashion advertisements of clothing brands are misleading	0	0	0	0	0
I think recycling your waste is good for the environment	0	$\bigcirc$	0	0	0
I think the clothing industry overall is bad for the environment	0	$\circ$	$\bigcirc$	0	0

In general, I know what recycling means.

○ Yes

O No

Read the statement and indicate how much you (dis)agree using the scale

	Completely disagree	Disagree	Neutral	Agree	Completely agree
I know what recycled polyester is made out of	0	0	0	$\circ$	$\bigcirc$

I think recycled polyester is made out of...

	Completely disagree	Disagree	Neutral	Agree	Completely agree
I know what recycled plastic is made out of	0	0	0	0	0
I think recycled plastic is made or	ut of				

#### Read the statement and indicate how much you (dis)agree using the scale

	Completely disagree	Disagree	Neutral	Agree	Completely agree
I know what recycled paper is made out of	0	0	0	0	0
I think recycled paper is made o	out of			10	

Imagine you are scrolling through your Instagram feed and you come across the following advertisement.

The advertisement is from the brand Truly Awear. The clothes displayed in the advertisement are made of recycled polyester. Please look at the advertisement thoroughly before answering the questions.



	Completely disagree	Disagree	Neutral	Agree	Completely agree
This advertisement gives me a positive feeling	0	$\bigcirc$	$\bigcirc$	0	0
I feel reluctant towards this advertisement	0	0	0	0	0

How do you perceive the likelihood of you buying a product of this brand after seeing the advertisement?

Unlikely	00000	Likely
Impossible	00000	Possible
Uncertain	00000	Certain
Absolutely not	00000	Absolutely

#### After seeing this advertisement, I think the brand is

Unpleasant	00000	Pleasant
Negative	00000	Positive
Uninspiring	00000	Inspiring
Uninteresting	00000	Interesting
Unappealing	00000	Appealing
Unattractive	00000	Attractive

#### Read the statements and indicate how much you (dis)agree using the scale

	Completely disagree	Disagree	Neutral	Agree	Completely agree
I think that the clothes in the advertisement are environmentally friendly	0	0	0	0	0
I think that Truly Awear is a sustainable brand	0	$\bigcirc$	0	$\bigcirc$	0
I think that the environmental impact of the clothes in the advertisement is high	0	0	0	0	0
I think that this clothing brand negatively impacts the environment	0	$\bigcirc$	$\bigcirc$	0	0
I would intent to buy the clothes displayed in the advertisement	0	$\bigcirc$	$\bigcirc$	0	0
I would intent to buy clothes from this brand	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0

	Completely disagree	Disagree	Neutral	Agree	Completely agree
I think Truly Awear is a trustworthy brand	0	$\bigcirc$	0	0	0
I think the brand can be trusted to be as sustainable as it claims to be in the advertisement	0	0	0	0	0
I think I could rely on this brand to solve problems	0	$\bigcirc$	0	0	0
Because of its clear focus on sustainability, I think the brand can be trusted	0	0	$\circ$	0	0

Read the statements and indicate how much you (dis)agree using the scale

	Completely disagree	Disagree	Neutral	Agree	Completely agree
I would share this Instagram post	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I would follow this Instagram account	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I would like this Instagram post	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
I would not leave a comment on this Instagram post	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
I would unfollow this Instagram account	0	0	0	0	0

Are you familiar with the social media platform Instagram

⊖ Yes

O No

Do you have an Instagram account

- Yes
- O No
- $\bigcirc\,$  I used to

How often do you use Instagram

- $\bigcirc$  Multiple times a day
- Daily
- Weekly
- Monthly

	Completely disagree	Disagree	Neutral	Agree	Completely agree
I think the clothing industry greatly impacts the world	0	0	$\bigcirc$	0	0
I think the clothing industry participates in environmentally friendly behaviour	0	0	0	0	0
I think sustainable fashion advertisements are misleading	0	0	$\bigcirc$	0	0
I think the clothing industry overall is bad for the environment	0	0	0	0	0

Please look at the Instagram advertisement again before answering the questions below.



	Completely disagree	Disagree	Neutral	Agree	Completely Agree
It seems realistic if this image is used as an advertisement for a clothing brand	0	0	$\bigcirc$	0	0
I think the background of this is image is congruent with the clothes displayed in the advertisement, which are made of recycled polyester	0	0	0	0	0
I think the background of the image contains elements of nature	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
I think the background of the image contains materials out of which recycled polyester is made	0	0	0	0	0
It seems realistic that the claim is used in an advertisement for a clothing brand	0	0	0	0	0

How do you perceive the message of the claim in the advertisement. Indicate using the scale below.

The claim in the advertisement ...

...prevents the world from becoming worse

You have reached the end of this survey.

If you have any questions or want to withdraw your participation, please feel free to contact me.

Thank you for your participation.

Pien van Dalen j.h.vandalen-1@student.utwente.nl

# Appendix V: Search log

Date	Source? Database (db), Book (b), Internet (url)	Search terms and strategies (Search profile incl. Boolean operators)	How many hits (how many relevant)	Related terms/auth ors	Notes
14-09- 2020	UTwente Library	''sustainable marketing''	126.962 hits	<u>Jaesuk</u> Jung, Sang Jin Kim, Kyung Hoon Kim	Too broad, some sources were useful for the introduction
21-09- 2020	UTwente Library	''sustainable marketing'' AND ''fashion industry''	4447 hits		Not everything is relevant as sustainability is broad and topics show sustainable fashion instead of sustainable marketing
27-10- 2020	Scopus	''sustainable marketing'' AND trust	192 results	Environment al, loyalty	Was looking for specific information which I was able to find, however all the other sources do not seem as relevant. Even though I entered ''sustainable marketing'' between quotation marks, it searched for ''sustainable AND marketing'' for some reason. Therefore I did not find the sources I was looking for
27-10- 2020	Scopus	<ul> <li>''sustainable marketing'' OR</li> <li>''green marketing'' AND</li> <li>''environment'' AND ''online''</li> <li>OR ''social platforms'' OR</li> <li>''social media platforms''</li> </ul>	10 results		One article seemed relevant however I could not download it even though I was signed in at the UT and I used the UT VPN.
27-10- 2020	Utwente Library	sustainable marketing on social media platforms	2643 results	Social media engagement, virtual, social media marketing	Some relevant sources on the first page.
9-11- 2020	Utwente library	Greenwashing clothing industry	34 results	Fashion industry, clothing branch.	Nice small amount of results and some results were highly relevant