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**Article**

## Drivers of Sustainable Consumption – Life Satisfaction and the Concreteness of Sustainable Product Attributes in Advertising

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# Marketing Review St.Gallen

Data and  
Creativity



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# Drivers of Sustainable Consumption

Life Satisfaction and the Concreteness of Sustainable Product Attributes in Advertising

To promote the sustainability of their products, marketers are rethinking their advertising. This study investigates the role of consumer life satisfaction and concrete messages in advertising. It shows that dissatisfied individuals attach higher importance to sustainable product attributes when they are presented in concrete terms, thus providing insights into the psychology of sustainable consumption.

Béatrice Martin, M.Sc., Christina Antonie Reh, M.Sc.

As the climate crisis unfolds, more and more companies are highlighting the sustainability attributes of their products in their advertising. Crises are known to affect consumers' sense of security and overall mental well-being. For more than a decade, the global index of unhappiness has been rising (Ammar et al., 2020; Clifton, 2022). This study highlights the interplay of consumers' current life satisfaction, sustainable consumption behavior and the concreteness of messaging in advertising. In two discrete choice experiments with 466 participants, this research demonstrates that dissatisfied people rate sustainable product attributes higher when they are advertised with concrete messages. The results show a positive, significant association between current dissatisfaction with life and a higher perceived relevance of concretely framed sustainability attributes of products, which remains largely robust to various controls. Thus, the study provides insights into the behavioral psychology of sustainable consumption, suggesting that marketers should consider indicators such as the satisfaction with life scale (SWLS) (Diener et al., 1985) when designing sustainability advertising. Ultimately, it highlights the need to address the psychological factors that underlie sustainable consumer behavior. Addressing dissatisfied consumers could increase overall sustainable consumption, as concretely communicated sustainability attributes are perceived as more relevant by dissatisfied consumers than by satisfied ones. The current crisis, which has left many people dissatisfied, may offer an opportunity to promote more sustainable consumption behavior – if communicated concretely.

Marketing can strongly influence consumer behavior and shape society. Sustainable consumption has been found to be one of the key levers to counteract climate change on the individual level (Grabs et al., 2016). Thus, consumer-facing marketing professionals have a significant role to play since they could use their campaigns to accelerate the transition towards a net zero economy (Kotler, 2011). To maximize their impact, marketing professionals need to know how to communicate about sustainability effectively. This is not limited to 'green' or 'sustainably minded' consumers as sustainable consumption will not remain a niche topic. However, how to persuade consumers to buy more sustainable products, which are often more expensive than conventional ones, remains an unresolved communication challenge.

At the core of the issue is the thin line between transparency about a product's sustainable footprint and overloading the consumer with too much detailed information. Knowing how much information to communicate about what makes a product sustainable is a key issue that could become a game changer for the effective framing of sustainability messages. Too much information can overwhelm consumers (Schmitt et al., 2018a), yet too little or too vague information can make them suspect greenwashing (Szabo & Webster, 2020). Thus, marketers need



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to carefully assess which attributes of sustainability to mention in their advertising, and how to frame their messages about these attributes. Text-only messages are often perceived as vague communication. Numbers have been shown to provide a cue for 'hard facts' (MacInnis et al., 1991) and can serve to reinforce text messages and to make them more concrete and specific. It is therefore important to investigate what is more effective for communicating the sustainability attributes of a product – text-only and vague, or number-based and concrete.

Marketing and psychological research have so far failed to provide clear-cut results that point decision-makers into one single direction. With this research, the authors aim to provide a cornerstone for how advertising may be used to encourage more people to consume more sustainably.

Thus, the goal of this research is to provide a better understanding of the impact of message concreteness on the perceived relevance of single and general sustainability attributes of a product. This study is meant to derive a nuanced picture of how to address heterogeneous consumer groups differing in their attitudes with regard to sustainability and their general satisfaction with life. The results of this study show that the more concrete a message is, the higher the importance weights of the sustainability attributes. These results are mainly driven by two attributes of concrete sustainability communication: environmental impact and ingredient type. The effect is stronger on sustainability attributes' relevance for people dissatisfied with their life vs. satisfied and stronger for 'green' vs. 'non-green' consumers. Challenging times can indeed serve as a catalyst for climate action by leveraging the interdependence between human well-being, life satisfaction, and the environment.

## Management Summary

With two discrete choice experiments, this research shows that concrete messages about sustainability can enhance the perceived relevance of sustainable product attributes and thus foster sustainable consumption behavior – in particular for individuals with low life satisfaction. A positive and significant association between low life satisfaction and a preference for products with concretely communicated sustainability attributes was established. This highlights the importance of addressing the psychological factors that underlie sustainable consumer behavior and framing sustainability messages in a concrete manner to promote sustainable consumption.

## Theoretical Background

Sustainability messages, whether social, economic, or environmental (Brown et al., 1987), can be powerful: They can affect individual behavior and influence consumer choice. The complete picture of what is effective sustainability communication is very complex. Many scandals about companies exaggerating or completely fabricating the environmental benefits of their products have damaged consumer trust (Chen & Chang, 2013). Thus, marketers advertising a sustainable product need to be careful in their communication.

Whether there is a communication design that encourages sustainable consumption, and what it might be, is not yet fully understood. One key aspect is the wording since it can strongly influence consumers' purchase decision, e.g., by sounding

assertive (Baek et al., 2015). A high level of interactivity can also enhance a sustainability message (Szabo & Webster, 2020). However, it is not clear yet how this relates to sustainability attributes. Vague claims do not seem to increase consumers' perceptions of greenwashing or lower consumers' purchase intentions (Schmuck et al., 2018). Construal level theory (CLT) of psychological distance provides a possible explanation for these different observations: CLT posits that there is a difference between objects that are psychologically perceived as closer to oneself, e.g., when they are detailed and have a directly relatable context (e.g., concrete messages), and psychologically distant objects that are seen at an abstract level, such as vague messages (Liberman & Trope, 1998). Reczek et al. (2018) presented initial findings that environmentally friendly products can be made more appealing by presenting detailed, concrete information about the sustainability attributes of the product. Thus, exposing individuals to sustainable vs. traditional product attributes in advertising may lead to more positive reactions if the sustainability features presented in the message are psychologically proximal, which is expected from concrete messages, rather than distal (concrete vs. vague messages).

Also, individual preferences can influence the response of consumers to sustainability messages. For example, environmentally conscious consumers, often referred to as 'green' consumers, are more likely to be skeptical of the sustainability messages in product advertising (Szabo & Webster 2020). On the other hand, Tucker et al. (2012) found that green consumers respond equally well to strong and weak 'green' product claims. They do not seem to doubt 'green' communications, independent of their style. Thus, 'green' consumers are generally supposed to be more responsive to sustainability messages, yet there is little knowledge about whether this holds true for different levels of concreteness.

## Main Propositions

- 1 It matters which sustainability attributes of a product marketers select for their advertising, as not all attributes are equally relevant to consumers.
- 2 Concrete message framing can enhance the perceived relevance of the sustainability attributes of a product.
- 3 Consumers dissatisfied with their lives put a lower value on sustainability attributes of a product, but concrete messages can significantly and positively influence their perception.

## Lessons Learned

- 1 Functional product attributes are still the most important ones, but sustainability attributes are gaining in relevance.
- 2 For encouraging more sustainable consumption, knowledge about which sustainable product attributes are most relevant to consumers in their purchase decisions is key.
- 3 The use of concrete sustainability messages, independently of which sustainability attributes are used, outperforms vague message framing.



Other consumer characteristics such as life satisfaction have been shown to significantly impact the effectiveness of different advertising strategies (Ju et al., 2017). So far, research on the impact of life satisfaction on sustainable behavior yields a mixed picture. On the one hand, a happy life is reported to be consistent with a more ecologically sustainable life. Researchers such as Nguyen et al. (2022) found that this is supported by various actions and purchase acts, such as giving eco-friendly gifts or buying regional foods (Kasser & Sheldon, 2002), purchasing recycled products or shopping with reusable bags (Wang & Kang, 2019; Binder & Blankenberg, 2017). On the other hand, recent results of laboratory experiments show no significant positive association between life satisfaction and sustainable behavior (Lange & Dewitte, 2020). So, higher levels of life satisfaction may not always lead to pro-environmental behavior. Some researchers also suggested that happy people might be too mentally happy to care about important contemporary issues, thus being less likely to act pro-socially to improve society or the world (Kushlev et al., 2019). This is also referred to as the ‘Pollyanna’ effect (Iliev et al., 2016). Overly optimistic and very happy people tend to participate less in some kinds of political action, whereas subjective satisfaction generally is positively associated with healthy behavior, interpersonal pro-social behavior, and political activity like voting or being active in the conservation of nature (Prati et al., 2017a; Kushlev et al., 2019). Pro-environmental consumption behaviors are seen – in this context – as pro-social behaviors, since they benefit other people and the environment (Schmitt et al., 2018b; Zelenski & Desrochers, 2021). Recently, research found that you need to care for yourself first before you can care for others (Diener et al., 2018); people with lower levels of subjective well-being are more likely to be consumed by their personal worries and do not care for others.

The economics of wellbeing argues that life satisfaction generally decreases during crises and times of inflation. Decreasing worldwide happiness levels have been reported for decades and are reinforced by the current crises, e.g., COVID-19 (Ammar et al., 2020; Clifton, 2022). At the same time, the number of weather-related disasters (e.g., heat waves, fires, droughts and flooding) has reached new records – the climate crisis is in full swing (World Meteorological Organization, 2021). It is well documented that climate change can influence life satisfaction (Maddison & Rehdanz, 2011; Weimann et al., 2015). More sustainable consumption could help to slow down and counteract climate change (Ritchie et al., 2023).

Thus, the key questions addressed in the present research are: Can marketing messages influence sustainable consumption? Does life satisfaction have an influence on how sustainably an individual consumes? Which impact does message framing have on consumers’ responses to sustainability vs. functional attributes of a product?

## Empirical Approach

### Methodology

To explore how consumers respond to different sustainability messages, discrete choice experiments (DCEs) were used. As part of the choice modeling approach, they are a multi-attribute stated preference technique and allow to ask respondents to perform a simple task closely resembling real-world decisions (Schlereth & Skiera, 2017). Unlike in field experiments, where many extraneous factors may influence the results, researchers have more control when using DCEs. They reveal latent patterns and nuances of complex consumer choices (Beisecker et al., 2022).

To capture the relevance of different sustainability attributes in comparison to functional attributes, eight attributes were used in the DC design: four functional ones (product performance, type of packaging, packaging size, price), three sustainability attributes (environmental impact, ingredient type, animal friendliness) and one additional visual attribute (image) (Table 1). We implemented and executed the questionnaire using the Online survey platform DISE (Schlereth et al., 2012).

The functional attributes were chosen based on prior research on product choices (Silayoi & Speece, 2007), and the sustainability attributes based on research by Schnabl et al. (2022) who studied the

**Table 1: Set-up of the Study**

Study	Study 1 (category cosmetics)	Study 2 (category pet food)
No. of respondents	N=236	N=230
Method	Discrete choice experiment	
Industry/ Product category	Cosmetics/body oil	Pet food/dry dog food
Task	Trade-off decision between three displayed products with 8 items as displayed attributes	
Experimental design	2-part between-participants (representative sample)	
Experimental manipulation	Concrete vs. vague messages	
Dependent measure	Product choice	
Attributes	<p><b>Sustainability attributes:</b> environmental impact (2 levels), ingredient type (3 levels), animal friendliness (2 levels)</p> <p><b>Functional attributes:</b> product performance (2 levels), type of packaging (3 levels), packaging size (3 levels), price (3 levels)</p> <p><b>Additional attribute:</b> image (2 levels)</p>	

Source: Own illustration.

concept of sustainability attributes and found that for fast-moving consumer goods (FCMG), these three attributes are most important to consumers. Each respondent got to view eight choice sets, each with three alternatives presented. To ensure a broader applicability of the findings, the experiment was conducted for two different fast-moving consumer goods: a cosmetic product (body oil) and pet food (dry dog food). The cosmetic and pet food sectors are both rapidly growing industries in which the question of sustainability is steadily gaining relevance for consumers and producers alike. This makes these industries well suited as contexts for the present research. To differentiate how consumers respond to vague vs. concrete messages in advertisements for sustainable products, two experimental conditions were designed for each context, namely concrete and vague messages (see Tables 1, 2 and 3). In the first condition, all attributes were described with a concrete message including numbers or the name of a certificate, e.g., ‘100% cruelty-free certified by PETA’ for the ani-

mal friendliness attribute. In the second condition, all attributes were described with a vague message, e.g., ‘This product was not tested on animals.’ Price and images were identical in the two versions. In each experiment, respondents were randomly assigned to either the vague or the concrete version.





Additionally, the respondents were asked to self-report their green attitudes using the GREEN scale developed by Haws et al. (2013). This is a one-factor six-item scale that predicts consumers’ green consumption behavior. Also, they had to indicate their satisfaction with life (SWL) (Pavot & Diener, 2008). Life satisfaction was measured using the SWL scale, which consists of five items (e.g., ‘My life is close to ideal’) that have to be scored from 1 (strongly disagree) to 7 (strongly agree). Based on the results of these two scales, the researchers grouped the respondents into ‘green’ and ‘non-green’, ‘satisfied’ and ‘dissatisfied’ consumers (see Appendix 1). These responses were used to determine how

Table 2: Textual Information Presented per Experimental Condition

Category of attributes		Specific attribute	# Levels	Condition 1 (concrete information)	Condition 2 (vague information)
Study 1 (category cosmetics)	Sustainability attributes	Environmental impact	2	This product avoids the emission of 2.53kg CO2eq by reducing the need of palm oil/–	We limit the carbon footprint of this product/–
		Ingredient type	3	100% organic ingredients certified by DEMETER/ 100% natural ingredients certified by NATRUE/–	Only organic ingredients/ All natural ingredients/–
		Animal friendliness	2	100% cruelty-free certified by PETA/–	No animal was harmed in the production of this product/–
	Functional attributes	Price	3	14€/16€/18€	
		Packaging size	3	100ml/200ml/300ml Travel size/Regular size/Maxi size	
		Type of packaging	3	Re-fillable system with >10,000 re-fill retail locations/100% recycled materials/ 100% virgin plastic packaging	Re-fillable packaging concept/ Made from recycled materials/ Plastic packaging
		Product performance	2	Keeps the skin soft for 24h/–	Keeps the skin soft for an entire day/–
		Product image	2	neutral/green background (see Table 3)	
Study 2 (category pet food)	Sustainability attributes	Environmental impact	2	This product lowers the carbon footprint by 642.7kgCO2eq/per dog per year through reducing the need of meat/–	We limit the carbon footprint of this product/-
		Ingredient type	3	100% organic ingredients/ 100% natural ingredients/–	Only organic ingredients/ All natural ingredients/–
		Animal friendliness	2	100% cruelty-free certified by PETA/–	This product was not tested on animals/–
	Functional attributes	Price	3	29.99€/34.99€/39.99€	
		Packaging size	3	6kg/8kg/10kg Small size/Regular size/Maxi size	
		Type of packaging	3	Re-fillable system with >10,000 re-fill retail locations/100% recycled materials/ 100% virgin plastic packaging	Re-fillable packaging concept/ Made from recycled materials/ Plastic packaging
		Product performance	2	100% hypoallergenic for sensitive stomachs/–	Healthy for sensitive guts/–
		Product image	2	neutral/green background (see Table 3)	

Source: Own illustration.

**Table 3: Illustration of the Product Images Used (Neutral vs. 'Green' Backgrounds)**

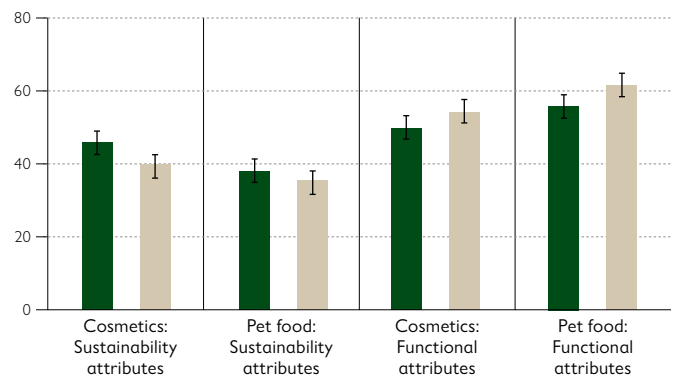
	Neutral background	Green background
Study 1 (category cosmetics)		
Study 2 (category pet food)		

Source: Own illustration.

**Figure 1: Relevance of Sustainability vs. Functional Attributes in Concrete vs. Vague**

Importance weights in % ■ Concrete message ■ Vague message

Importance weights for sustainability vs. functional attributes in Study 1 & 2 for concrete vs. vague message



Source: Own illustration.

consumers' personal life situations might influence how they respond to concrete or vague sustainability messages. Finally, demographic information such as gender and age was collected.

## Data Collection

Two discrete choice experiments with convenience samples were conducted in November 2022, with a total of 236 respondents in Study 1 (category cosmetics) and 230 respondents in Study 2 (category pet food). The pet food study replicated the cosmetics study to test the applicability of the results to another consumer goods category.

Respondents were recruited through Prolific, a panel provider. They were paid a small amount of money for their time, and the researchers used attention check questions to control the quality of responses. Respondents were pre-screened using the tools provided by Prolific to ensure that they were between the ages of 18 and 70 years, currently resident in Western Europe, and, in the case of Study 2, dog owners, in order to obtain realistic choices.

In Study 1, 52.97% of respondents identified as female, and 45.76% as male, in Study 2, 55.08% of respondents identified as female, and 41.53% as male. The majority were between 18 and 40 years old (Study 1: 63.99%; Study 2: 65.25%), and more than half of them (Study 1: 58.47%; Study 2: 62.29%) have at least an undergraduate degree. 66.53% of the respondents of Study 1 and 69.49% of the

respondents of Study 2 indicated that they have to watch their budget closely or very closely (see Appendices 2 and 3).

## Results

The descriptive results show that consumers responded differently to vague and concrete messages, both for sustainable and functional attributes, as shown in Figure 1. Overall, concrete messaging led to a higher perceived relevance of sustainability attributes, whereas vague messaging outperformed for functional attributes.

The cumulative importance weights of the sustainability attributes increased by 6.27 percentage points (46.24% vs. 39.97%) for cosmetics and by 2.8 percentage points (38.62% vs. 35.82%) for pet food when the message was worded in concrete terms. Welch's t-tests, which account for unequal variances between test groups, show the difference is highly significant ( $p < 0.01$ ) in both cases. The functional attributes lost in importance relative to the sustainability attributes when the messages were worded concretely. While, overall, functional attributes remained more important than sustainability attributes, the difference diminished by 13.16 percentage points ((55.80% vs. 38.62%) – (50.26% vs. 46.24%)) in the cosmetics study and by 11.37 percentage points ((61.24% vs. 35.82%) – (54.42% vs. 39.97%)) in the pet food study.

The general increase in the importance of sustainability attributes when concrete messages were used is significantly ( $p < 0.05$ )



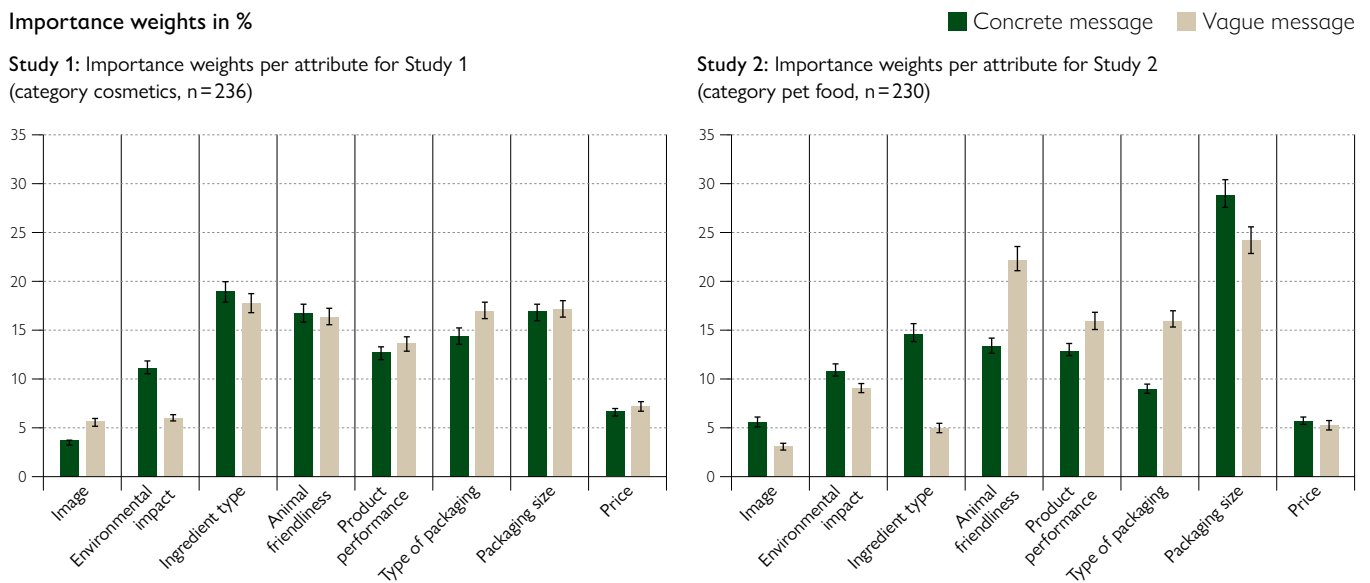
driven by two out of the three sustainability attributes used for cosmetic products in this study (figure 2): environmental impact and ingredient type. The importance of ingredient type increased by +1.11 percentage points (18.68% vs. 17.57%) and that of environmental impact by +4.98 percentage points (11.08% vs. 6.10%). While animal friendliness is more important to consumers of cosmetic products than environmental impact, its relevance was not significantly influenced by a change from vague to concrete messaging. For pet food (figure 2 right), the relevance of environmental impact and ingredient type also significantly ( $p < 0.05$ ) increased when concrete messages were used, but the relevance of animal friendliness decreased significantly ( $p < 0.05$ ). When vague messages were used, animal friendliness was the most relevant sustainability attribute for consumers choosing pet food, whereas when concrete messages were used, its importance weight dropped below that of ingredient type. For the functional attributes, message concreteness also influenced the relevance of individual attributes. For example, packaging gained significantly ( $p < 0.05$ ) in relevance when the messages were vague. This result is robust across both studies. The relevance of the price, which was not varied between versions, did not change significantly depending on the concreteness level used to describe the other attributes. The results of Welch's t-tests were confirmed by a regression analysis that controlled for other co-founding variables such as employment, status, education, budget, and climate change worry. This analysis is not included here because it is beyond the scope of this paper.

Being 'green' makes consumers generally more receptive to any sustainability messages (Haws et al., 2013). Consumers' green attitude amplified the difference in relevance between concrete and vague sustainability messages. In the case of cosmetics, green consumers found concrete sustainability messages by 7.21 percentage points (48.96% vs. 41.75%) more relevant than vague messages (see figure 3 left). This effect was highly significant ( $p < 0.01$ ). For non-green consumers, the difference was only 0.53 percentage points (38.52% vs. 37.99%) and not significant. For pet food (see figure 3 right), green consumers found concrete sustainability messages by 2.40 percentage points (39.84% vs. 37.44%) more relevant than vague ones, while non-green consumers found them by 2.42 percentage points (35.32% vs. 32.74%) more relevant than vague ones. Both differences are not significant, yet point in the same direction as in the cosmetics study.

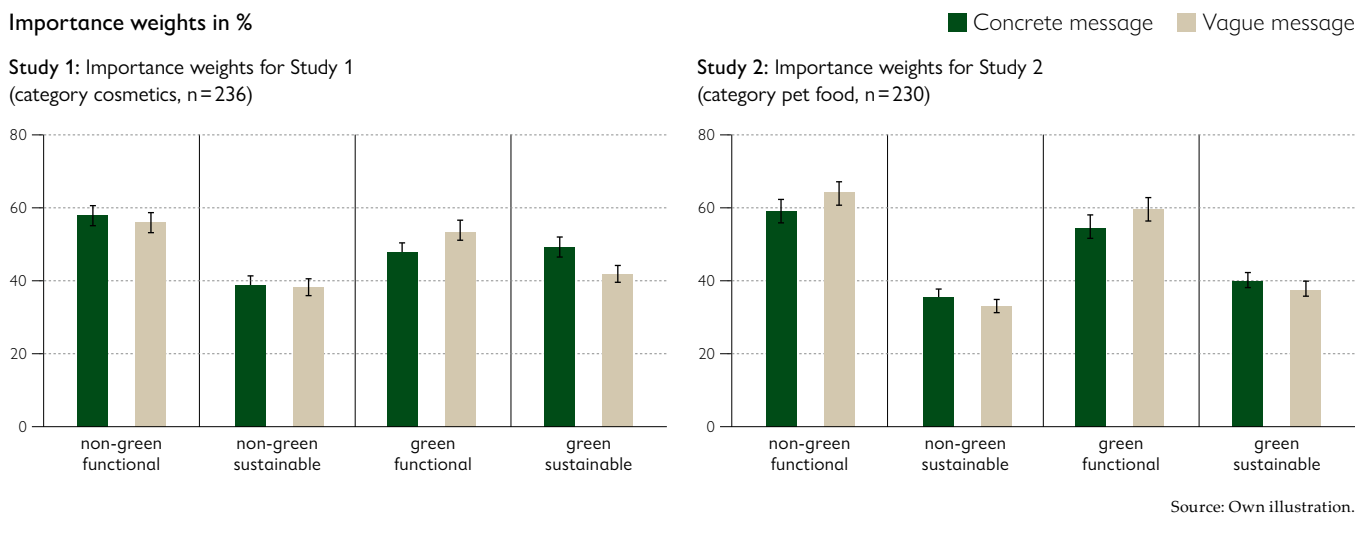
Overall life satisfaction also had an influence on consumers' responses to sustainability messages. For consumers dissatisfied with their lives, the average cumulative importance weight for cosmetic products was 47.98% if the messages they viewed were concrete but only 38.88% if the messages were vague (see figure 4 left). The difference is highly significant ( $p < 0.01$ ).

Consumers satisfied with their lives were much less affected by the concreteness of a message. Here the importance weights for the sustainability attributes were 44.70% for concrete

**Figure 2: Relevance of Individual Sustainability vs. Functional Attributes in Concrete vs. Vague Messages**



**Figure 3: Relevance of Sustainability vs. Functional Attributes in Concrete vs. Vague Messages for Green vs. Non-green Consumers**



messages and 41.05% for vague messages. The difference is still significant ( $p < 0.05$ ), but much smaller. The pattern was the same for pet food (see figure 4 right): Consumers dissatisfied with their lives responded more strongly to changes in the concreteness of messages than those satisfied with their lives.

## Discussion

This research suggests that using concrete messages to communicate sustainability attributes can encourage consumers to buy sustainable products. As suggested by CLT, choosing a sustainable product becomes easier when proximity is perceived (Liberman & Trope, 1998; Trope & Liberman, 2010). This is in alignment with recent studies (Reczek et al., 2018).

The results show that, overall, functional product attributes have a higher relevance for purchase decisions than sustainability attributes. This means that consumers regard a product's performance and price as more important for their purchase decision than its environmental impact or its ingredients. This is in accordance with research on the sustainability claims of various new products that negatively affected sales (Van Doorn et al., 2021).

Green consumers place more importance on a product's sustainability attributes than less environmentally aware consumers, regardless of how concrete the message is. Yet, they value sustainability attributes more if these are communicated

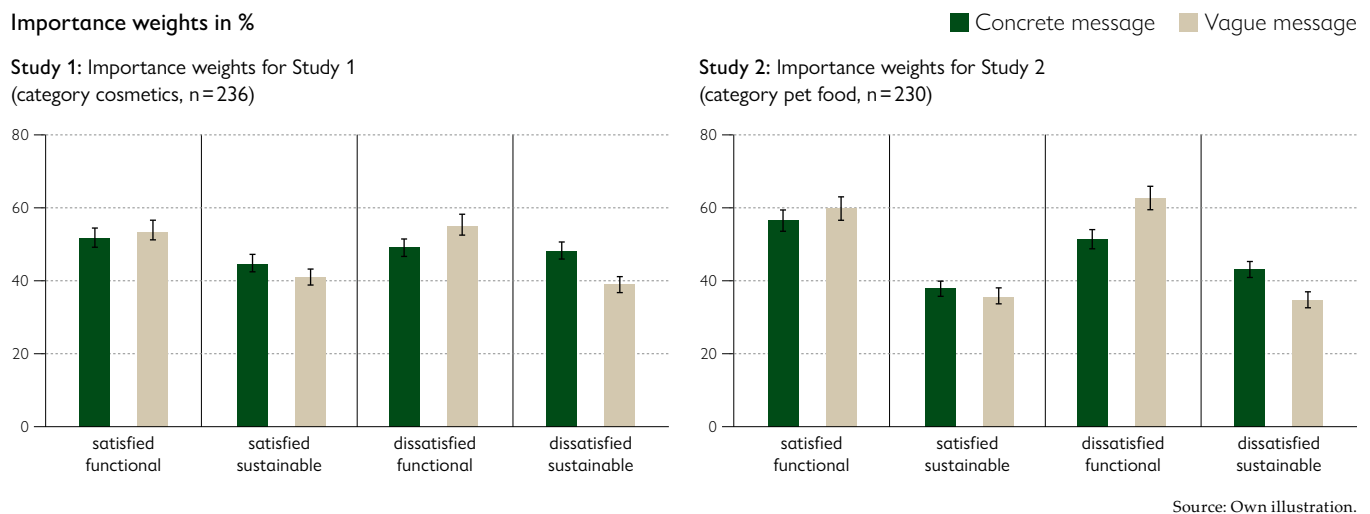
concretely rather than just vaguely. For consumers with less environmental consciousness, the effect of concrete messages was lower, yet still existent. This difference may be due to the fact that green consumers are more likely to suspect greenwashing and therefore do not respond positively to vague sustainability messages. Consumers with a lower environmental consciousness are less likely to suspect greenwashing. They are also more likely to experience information overload and thus do not respond positively to more concreteness in a sustainability message. Consequently, it may make sense for marketers to target their 'green' and 'non-green' consumers separately, e.g., via different media or retail formats. These findings go beyond the traditional analysis of the relationship between environmental awareness, income or wealth and sustainability (Hagerty & Veenhoven, 2003).

While the average relevance of sustainability attributes is higher for consumers satisfied with their lives, the relevance of sustainability attributes for consumers dissatisfied with their lives increases significantly if the sustainability messages are concrete rather than vague. Thus, happy people are more likely to act sustainably, which has also been found in previous research (Sameer et al., 2021; Prati et al., 2017b; Kushlev et al., 2019). The 'Pollyanna' effect, i.e., that happy people do not care about sustainability, as argued by Iliev et al. (2016), thus cannot be confirmed by the present study. However, it yields new insights into the behavior of dissatisfied people: When addressing dissatisfied consumers, the messages have to be concrete and specific, e.g.,



For further supplementary tables to the article, visit: <https://unisg.link/MRSG-Martin-Reh>

**Figure 4: Relevance of Sustainability vs. Functional Attributes in Concrete vs. Vague Message for Satisfied vs. Dissatisfied Consumers**



with regard to environmental impact and ingredients. By making sustainability messages more concrete, the lower relevance they attribute to sustainability can be counteracted. This finding suggests that marketers need to adapt their communication strategy in the current times of crisis and rising consumer dissatisfaction to promote sustainable consumption behavior.

ideal time for companies to get their consumers to pay more attention to the sustainability attributes of their products by focusing on making their marketing messages more concrete. To obtain the information they need to develop concrete messages, companies can use impact estimation programs to calculate the exact carbon footprint of their supply chain (Peano et al., 2015).

## Managerial Implications

According to this research the product attributes most important for consumers' purchasing decisions are still of a functional nature. However, there is also potential in sustainability attributes, and the best way to encourage more 'non-green' and dissatisfied people to rate sustainability attributes higher is with a concrete message on environmental impact and ingredient type.

For dissatisfied consumers, the authors find that concrete communication of sustainability attributes has a significant effect on their ranking of the relevance of these attributes. This means that there is an opportunity for companies to use the current crisis to encourage more sustainable consumption behavior. In mentally challenging times of insecurity, climate crisis, inflation, and war, consumers are more susceptible to messages that are concrete and specific. Although times are tough right now, there is untapped potential in sustainability advertising. The current circumstances could prove to be an

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# Drivers of Sustainable Consumption

## Life Satisfaction and the Concreteness of Sustainable Product Attributes in Advertising

### Appendix 1: Scales Applied in this Research

Measure of individual green consumption behavior	
Haws, K.L., Winterich, K.P., & Naylor, R.W. (2013). Seeing The World Through Green-Tinted Glasses: Green Consumption Values and Responses to Environmentally Friendly Products. <i>Journal of Consumer Psychology</i> , 24(3), 336-354.	
<b>GREEN Scale</b>	<ul style="list-style-type: none"> <li>· It is important to me that the products I use do not harm the environment.</li> <li>· I consider the potential environmental impact of my actions when making many of my decisions.</li> <li>· My purchase habits are affected by my concern for the environment.</li> <li>· I am concerned about wasting the resources of our planet.</li> <li>· I would describe myself as environmentally responsible.</li> <li>· I am willing to be inconvenienced in order to take actions that are more environmentally friendly.</li> </ul>
<b>Scoring</b>	Scoring should be kept continuous (sum up scores on each item) with 5-point differences
Measure of individual satisfaction with life	
Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. <i>Journal of Personality Assessment</i> , 49(1), 71-75.	
<b>Satisfaction with Life Scale (SLS)</b>	<ul style="list-style-type: none"> <li>· In most ways my life is close to my ideal.</li> <li>· The conditions of my life are excellent.</li> <li>· I am satisfied with my life.</li> <li>· So far I have gotten the important things I want in life.</li> <li>· If I could live my life over, I would change almost nothing.</li> </ul>
<b>Scoring</b>	Scoring should be kept continuous (sum up scores on each item) with 5-point differences.

Source: Own illustration.



## Appendix 2: Demographic Characteristics in Study 1 (Category Cosmetics)

Gender	Age	Highest Level of Education	Employment Situation	Financial Situation
<b>Female (52.97%)</b>	18–30 (39.41%)	Graduate university degree or higher (30.08%)	Employee (56.78%)	Very closely (33.90%)
<b>Male (45.76%)</b>	31–40 (24.58%)	High school certificate (29.66%)	Student (13.56%)	Closely (32.63%)
<b>Other (1.27%)</b>	41–50 (21.19%)	Undergraduate university degree (28.39%)	Self-employed (11.44%)	A bit (23.73%)
	51–60 (9.32%)	Secondary school certificate (5.93%)	Unemployed (5.08%)	Not much (7.63%)
	61–70 (5.08%)	Vocational school certificate (4.66%)	Pensioner (3.39%)	Not at all (1.27%)
	71+ (0.42%)	I do not want to provide this information (1.27%)	Other (3.39%)	I do not want to provide this information (0.85%)
	Under 18 years old (0.00%)	No educational qualifications (0.00%)	Stay at home parent / caretaker (2.54%)	
	I do not want to provide this information (0.00%)		Public servant (2.12%)	
			I do not want to provide this information (0.85%)	
			Employer (0.85%)	

N = 236. Source: Own illustration.

## Appendix 3: Demographic Characteristics in Study 2 (Category Pet Food)

Gender	Age	Highest Level of Education	Employment Situation	Financial Situation
<b>Female (56.52%)</b>	18–30 (40.43%)	Graduate university degree or higher (35.22%)	Employee (61.74%)	Very closely (35.59%)
<b>Male (42.61%)</b>	31–40 (26.52%)	Undergraduate university degree (28.70%)	Self-employed (11.74%)	Closely (33.90%)
<b>Other (0.87%)</b>	41–50 (19.13%)	High school certificate (23.04%)	Student (11.74%)	A bit (17.80%)
	51–60 (9.13%)	Vocational school certificate (6.96%)	Unemployed (6.09%)	Not much (8.90%)
	61–70 (4.78%)	Secondary school certificate (3.91%)	Stay at home parent / caretaker (3.04%)	I do not want to provide this information (0.85%)
	71+ (0.00%)	I do not want to provide this information (1.30%)	Other (3.04%)	Not at all (0.42%)
	Under 18 years old (0.00%)	No educational qualifications (0.87%)	Public servant (1.30%)	
	I do not want to provide this information (0.00%)		Pensioner (0.87%)	
			I do not want to provide this information (0.43%)	
			Employer (0.00%)	

N = 230. Source: Own illustration.