

## The End of the World or Just a Turning Point? Effects of Negative and Positive Wording within Sustainability Campaigns on Social Media

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### Abstract

*The internet and social media are constantly evolving and providing innovations for communication. Persuasive communication, like advertisements, can be adapted to peoples' personal preferences and desires based on tracked data. Emotions have been found to play an important role within persuasion. Based on theoretical assumptions of framing and affective priming, we hypothesize different effects of positive and negative messages and mood within social media advertising. To investigate the reception of ads regarding their persuasiveness in sustainability campaigns we conducted an online experiment using a 2x2 between design (N=147) measuring ad evaluation and behavioral intention. Our findings revealed that wording can be an influential factor in persuasive messages towards more sustainability. Positive framing led to a better ad evaluation than negative wording. However, behavioral intention was not affected and there was no enhancing effect of recipients' environmental awareness.*

**Keywords:** Social Media Advertising, Emotional Wording, Sustainability Campaigns, Persuasion, Microtargeting.

### 1. Introduction

Reflecting on changes in recent years, people spend an ever-increasing amount of time online. Due to that, enterprises like companies, political actors, and non-governmental organizations (NGOs) are continuously adapting to digital innovations and new forms of communication. Online advertising is one communication approach, that enables personalized communication by segmenting a large audience into target groups based on online data to address each of them with specific content (Prietzl, 2020). Algorithms and data analytics are systematically applied to communicate more efficiently (Agan,

2007). These targeted ads can be highly persuasive as they are tailored to personal attributes such as interests or characteristic traits (Lewandowsky et al., 2020). Kosinski and colleagues (2013) showed the possibility of deriving personality traits and other personal information from Facebook likes. This approach could be implemented for commercial but also political advertising that matches those personal variables to appear more persuasive. The so-called microtargeting consists of forming small (micro) groups and sending them personalized ads (Papakyriakopoulos et al., 2018). However, matching techniques using big data can not only target personality traits or interests, but also emotions or mood (Zarouali et al., 2020). The approaches of emotionalized targeting become even more prevalent in the light of revelations of whistle-blower Francis Haugen in 2021 (Whitwam, 2021). Haugen stated that Facebook stresses negative emotions like hate or anger as they trigger more activation and therefore engagement on the platform. Within marketing communication, emotional appeals and choice of words are likewise used in the competition for users' attention (Borah, 2016; Richey, 2012). However, those appeals are often containing positive emotions to transfer the positivity to the advertised product, service, or candidate (Malloy & Pearson-Merkowitz, 2016). Negative emotions within advertising can also serve to increase attention and affect behavioral intentions of the audience. Especially advertising regarding healthy behavior, donations towards charity organizations, or sustainability campaigns, can profit by enhancing negative emotions, to describe the severity of the message (Meyerowitz & Chaiken, 1987). Campaigns towards more sustainability can have a commercial but also political aspect as they address rather a greater good than ones' own advantage. Also, senders of sustainability campaigns can be enterprises like companies, but also governmental or non-governmental organizations, with the goal to enhance

more sustainable behavior or purchases. With the growing awareness of the climate crisis and understanding, that this crisis needs global political measures (Wise, 2021), the question how sustainable behaviors can be propagated gains relevance.

Since approaches of microtargeting are still mostly untransparent and were allegedly implemented in manipulative ways, they have been widely discussed, especially in the political context. The marketing firm Cambridge Analytica claimed to have used highly personalized advertising on Facebook in the 2016 US election campaign for Trump or the UK Brexit campaign (Heawood, 2018). Though legal measures were taken to counter those potentially manipulative advertisements (Allan, 2019), big data still offers ways to influence people like microtargeting.

To enlighten the effects of framing towards positive or negative emotions in social media advertising, this study uses a sustainability campaign context. We investigate the effects of emotional wording and how matching mood and wording might enhance evaluation of the advertisement and intention of sustainable behavior following the ad reception. Our aim is to better understand how social media and advertisers might use targeting focusing on emotions to increase the effectiveness of their campaigns.

## **2. Theoretical Background**

### **2.1 Advances and effects of online microtargeting**

Through technological innovation and the adaptation of applied advertising techniques, the use of collected “psychometric data to trigger a whole range of emotional and subconscious responses” is increasingly prevalent (Zarouali et al., 2020, p. 3). Effectiveness of marketing might be enhanced by tailoring ads to the desires and personality traits of recipients (Hirsh et al., 2012). Online Microtargeting describes a method of targeting ads specifically towards a designated audience (Matz et al., 2017). This method entails a psychographic segmentation based on big data and algorithms that match segmented target groups and personalized messages (Papakyriakopoulos, 2021; Prietzel, 2020). Using algorithmic approaches to increase effectiveness is also gaining interest in political campaigns. The so-called Online Political Microtargeting (OPM) was allegedly used in U.S. elections to influence potential voters and their attitudes (Zuiderveen Borgesius et al., 2018). However, it remains unclear how those algorithmic advertising could be applied to

manipulate the political discourse and reasoning processes of the electorate (Andrejevic et al., 2021). The lack of transparency of companies and organizations within this context entails difficulties in understanding if and how OPM is applied.

In light of the possibilities that big data offers for political or sustainability campaigns, it needs to be enlightened how people can be influenced to understand chances or threats. Research on microtargeting found matching of personality and messages to be more persuasive, resulting in higher click-rates and lead to higher intention to act, meaning more purchases (Matz et al., 2017). A higher persuasiveness of personalized content was also found for political content (Decker & Krämer, 2022; Zarouali et al., 2020). When looking at the effects of emotional framing in persuasive communication like Microtargeting, Zarouali and colleagues (2020) implemented a second study investigating personality and affect congruity. They found that affect congruity, derived from assumptions about which emotions (fear or enthusiasm) are more appealing for extraverts or introverts, significantly affected ad evaluation and behavioral intention in a political setting. This means, that emotional framing of a message affects following evaluations and intended behavior.

Based on these findings, the question arises, to which extent this could also influence the reception of political actors like NGOs, that advertise sustainable products using emotional wording and targeting users in a certain emotional state. As due to the climate crisis (political and commercial) organizations will have to find measures that increase more sustainable behaviors.

### **2.2 Persuasive communication and behavioral intentions**

Theoretical models on persuasion describe different ways of information processing and their impact on attitude changes. When looking at persuasive communication and how it can be strategically applied, framing certain aspects could be an effective approach. Framing theory states that people might come to different opinions regarding the same object depending on which aspects are set into focus of a persuasive appeal (Chong & Druckman, 2007). While sometimes framing negative outcomes might lead to more effective communication (Meyerowitz & Chaiken, 1987). advertising often contains positive messages. A focus on positivity in advertising can be explained by theoretical assumptions of affective priming (Hermans et al., 1994) that states that an affective

arousal can influence information processing in the sense that congruency of valence decreases the processing time. As advertising is often perceived for only a few seconds, a positive evaluation of the advertised message could be enhanced by priming positive emotions.

Most persuasive appeals, like advertising or political campaigns, not only aim at changing people's attitudes, but also want to affect the following behavior. Following the evaluation of the advertised product or candidate, a purchase or vote is the desired outcome. According to Ajzen's (1991) theory of planned behavior, a person's decision to perform a certain behavior can be determined by the intention to engage in that behavior. The intention can be derived from attitudes, subjective norms, as well as perceived behavioral control. Therefore, ads may impact recipients' attitudes due to different emotional framing, which could then lead to stronger intentions to act.

### **2.3 Effects of positive and negative wording in advertising**

As described above, the framing of a message can induce different ways of processing and therefore its outcomes. Knowing, that advertising can be adapted to the individuals' characteristics this strategy could also lead to different actions (Hine et al., 2016). It is suggested that differentiated wording is a form of framing in this context (Zuiderveen Borgesius et al., 2018) and thus may influence the reception of a message as well as subsequent attitudes (Tykocinski et al., 1994). Subtle nuances of wording can lead to changes in interpretation and persuasiveness of a message. Furthermore, emotional wording could have an amplified impact, as both emotions and moods are relevant constructs for influencing individuals (Zarouali et al., 2020). With regard to sustainability campaigns, Kao and Du (2020) found that positive emotions can affect advertising and brand attitudes within green marketing.

According to Desmet et al. (2016), moods are of a longer duration than emotions and tend to be less intense. In addition, unlike emotions, moods are not directed towards a specific circumstance but operate on a global level. Moods may also influence the perception of a person. In contrast, emotions control current thoughts. It is hereby crucial to note that moods and emotions are dynamically linked to one another. According to this, the first hypothesis of this research states:

*H1: The (a) evaluation of social media ads and the (b) behavioral intention to support the sending NGO differ between positive and negative framing.*

*H2: The (a) evaluation of social media ads and the (b) behavioral intention to support the sending NGO differ between positive and negative mood.*

Within political communication and advertisements, emotional appeals are commonly used (Richey, 2012) and are further capable of strengthening or weakening an individual's intention to act (Hornsey & Fielding, 2016). Typically, advertising is positively worded because it is perceived more favorably, while negative messages are considered critically, especially in a political context (Percy, 1982). In contrast to that, previous research has shown that messages containing strong negative emotions (Hine et al., 2016) or pessimistic wording (Hornsey & Fielding, 2016) could enhance the individual's intention to act. In conclusion, it seems possible to affect the reception of a message as well as its processing through emotional wording even though the most effective valence of the emotion is unclear. Therefore, it seems dependent on the context of the advertisement (e.g., advertised product or service, personal characteristics, or state of the recipient).

Discrepancies can exist not only in relation to group conformities but also concerning the self. This instance is described in self-discrepancy-theory (Higgins, 1987). The self is divided into three sections: the actual self, the ideal self and the ought self. Self-discrepancies can arise if differences within these self-concepts exist. Due to such discrepancies, negative emotional states emerge as people strive for consistency (Festinger, 1957). Personalized advertising could be a way to create congruency between the ad and the viewers' opinion, emotional state, or interests (e.g., Zarouali et al., 2020). Consequently, this congruence could result in an increased persuasiveness of the message as well as higher political participation (Matthes & Marquart, 2013). We postulate that if the emotional wording matches with the receiver's mood, it is considered positive since a congruence has been established. If a correspondence between the emotional wording and mood cannot be obtained, the message is evaluated negatively because of its incongruity. Therefore, we hypothesize the following:

*H3: The (a) evaluation of social media ads and the (b) behavioral intention to support the sending NGO are higher when wording and mood align.*

## 2.4 Sustainability campaigns and behavioral changes

In times of climate crisis and its increasing effects on societies, enterprises and organizations strive towards sustainable developments. To increase environmental-friendly behavior not only organizations need to act, but everyone should rethink behaviors. Therefore, sustainable marketing is needed to promote such changes. Research found, that in this setting, negative framing can increase behavioral intentions towards more sustainability (Hine et al., 2016).

Another relevant factor towards behavioral changes, as postulated by the theory of planned behavior are social norms (Ajzen, 1991). If sustainable behavior is set as a norm and is further considered as an acceptable behavior by the group, social pressure to behave in conformity with the established norm is created (Rettie et al., 2012). As a result of the conformity, one's own behavior is adapted to the accepted behavior to avoid any discrepancies or sanctions. Goldstein et al. (2008) demonstrated that sustainable behavior has a higher probability of occurrence if a message includes social norms and group conformities. Therefore, the own and the normalized sustainable behavior may influence one's own perception of a message (Tykocinski et al., 1994) and the intention to act upon it (Ajzen, 1991). Additionally, individuals who care about an issue are more likely to advocate for their attitudes (Schuman & Presser, 1981). Personal relevance of an issue could increase the central processing of the message which then leads to stronger attitudes and higher intention to act accordingly (Petty & Cacioppo, 1986). The influence of topic relevance has been found to predict online behavior in political settings (Morosoli et al., 2022).

Based on these findings, we assume that environmental awareness is a relevant variable when investigating sustainability campaigns. People who are already aware of environmental-friendly behaviors might see them as a social norm and also see relevance in messages regarding this topic. Consequently, a strong attitude and intention to act can be formed, if the message of a sustainability campaign based on emotional wording is processed on the central path of persuasion. Therefore, we assume:

*H4: The effect of the wording on the (a) ad evaluation and the (b) behavioral intention towards the NGO is moderated by environmental awareness.*

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<sup>1</sup>[https://osf.io/k2tda/?view\\_only=739f859307474d98aa958e8d08439610](https://osf.io/k2tda/?view_only=739f859307474d98aa958e8d08439610)

## 3. Method

To test the different effects of wording in social media advertising regarding sustainability as derived above, an online experiment was conducted. A 2x2 (positive vs. negative wording / positive vs. negative priming) between-subject design was employed. The four experimental groups were randomly assigned. Participants were asked to do a priming task, containing either positive or negative words and later exposed to social media advertising using positive or negative wording. Approval was obtained from the department's ethics committee and original hypothesis, measured variables, and planned data analysis of the study were preregistered on OFS<sup>1</sup> prior to data retrieval. Further analyses are designated as such.

### 3.1 Pre-test of stimulus material and priming task

A pre-test with 22 participants was conducted to test words that were used within the priming task and the social media ads that were implemented as stimuli. We chose ten words from the *Affective Norms for English words* (Bradley & Lang, 1999) that were rated regarding their valence on a five-point Likert scale (1 = "very negative" to 5 = "very positive"). Five words that were rated most positive or most negative were selected for the emotional priming task. Stimuli material was chosen from a set of twelve ads either containing positive or negative wording. All ads were created based on actual Instagram feed advertisements using a NGO as the sender of the ads. Positive ads, focused on positive aspects of sustainable behavior using words like "hero", "love", or "responsible", negative ads addressed the negative impact of unsustainable behavior using negative words like "sin", "destroy", or "misbehave". To increase behavioral intentions all ads contained a proposal to act including the advertised product (Witte, 1992). Products depicted were a reusable coffee mug, a jute bag, and a soap bar. The ads were rated using a five-point Likert scale (1 = "very negative" to 5 = "very positive") and the three most positive and most negative ads were selected for the study. Final stimuli for the manipulation can be found on OSF<sup>1</sup>.

### 3.2 Measures

We assessed *mood* using the Current Mood Scale (Dalbert, 1992). It consists of 19 items (e.g., “joyful”) which were rated in relation to the current mood state on a seven-point Likert scale (1 = “not at all”, 7 = “very strongly”). Negative items were reverse coded to calculate an overall mood score for the analysis ( $M = 4.9$ ,  $SD = 1.0$ ,  $\alpha = .93$ ). *Ad evaluation* was measured using six items (e.g., “I agree with the message of the ad.”) on a five-point Likert scale (1 = “not true”, 5 = “very true”) that were rated for each of the three stimuli shown. All ratings were then used to calculate a mean score ( $M = 3.5$ ,  $SD = 0.66$ ,  $\alpha = .91$ ). Participants' *behavioral intention* was assessed through five items (e.g., “Use more sustainable alternatives in everyday life.”) rated on a five-point Likert scale (1 = “unlikely”, 5 = “likely”;  $M = 2.7$ ,  $SD = 0.7$ ,  $\alpha = .68$ ). The *environmental awareness* was measured using a shortened form of a scale for key indicators of environmental awareness (Geiger & Holzhauser, 2019). The scale contains nine items (e.g., “I buy food from organic farming”) of which seven were rated by the subjects on a five-point Likert scale (1 = “never”, 6 = “always”), two of them reversed. Another two items were rated on a bipolar scale (1 = “no”, 6 = “yes”) that adjusted to the Likert scale to be used for the mean score ( $M = 3.6$ ,  $SD = 0.7$ ,  $\alpha = .53$ ).

### 3.3 Procedure

First, we measured participants individual environmental awareness. Afterwards, participants were randomly assigned to an either positive or negative priming task, which contained a shortened version of the Scrambled Sentence Test (SST) by Srull and Wyer (1979). For this test, the subjects had to form five four-word sentences using five given words each. The sentences were required to be grammatically correct. The given words contained one of the previously tested priming words (positive vs. negative). Because the subjects were actively engaged in forming the sentences, it is assumed that the prime stimulus (positive vs. negative) was subconsciously processed (Bargh et al., 1996). Next, the perceived mood was assessed. After that, the participants received a short explanatory text which introduced the fictitious NGO “Go Green” followed by three Instagram ads depicting sustainable products (reusable coffee cup, jute bag, and soap bar). Depending on experimental group, those were framed positive or negative. Each ad was shown for at least 30 seconds, allowing the subjects to view both the ad and its text. After each ad, the subjects were asked for their evaluation of the ad. Subsequently, the

participants indicated their behavioral intention to support the NGO. Lastly, participants were asked about their socio-demographic data.

### 3.4 Sample

The subjects were recruited via the online platform surveycircle.com (reciprocity approach; SurveyCircle, 2022) as well as via Facebook and WhatsApp groups (voluntary participation). There was no financial compensation for participation. The dataset was inspected, and six cases were removed due to incorrect answers within the priming task. One participant was excluded due to a long string analysis (Curran, 2016). Thus, the final data set comprises 147 participants, 102 identified themselves as female. Participants age ranged between 16 and 57, with a mean of 26.0 years ( $SD = 7.3$ ). Most participants were highly educated, 58.5 % had a technical college or university degree and 38.1 % had a high school diploma or university entrance qualification. With 73.5 % most of them were students, 20.4 % employees, and 6.1 % other occupations.

## 4. Results

### 4.1 Preliminary analysis

Statistical analyses to test the stated hypotheses were conducted using IBM SPSS version 25 and PROCESS version 4.0 (Hayes & Montoya, 2017). We tested the success of the mood manipulation using a t-test for independent samples. This revealed no significant difference in participants mood between positive ( $M = 5.0$ ,  $SD = 1.0$ ) and negative group [ $M = 4.8$ ,  $SD = 1.0$ ;  $t(145) = .65$ ,  $p = .52$ ]. However, as priming theoretically is a subconscious process (Bargh et al., 1996), we chose to analyze group differences as hypothesized.

### 4.2 Hypothesis testing

The first two hypothesis assumed that the experimental groups (mood, framing) differ in ad evaluation and behavioral intention. The third hypothesis expected higher ad evaluation and behavioral intention when mood of the receiver and wording of the message align. We conducted a MANCOVA using environmental awareness and mood as covariates to test these three hypotheses. The dependent variable ad evaluation (H1/2a),  $F(3, 141) = 20.29$ ,  $p < .001$ , partial  $\eta^2 = .302$  significantly differed between the groups. The results of the Bonferroni-corrected post-hoc analysis

regarding the mean differences in ad evaluation between all manipulation groups are shown in table 1.

**Table 1. Pairwise Comparison of Ad Evaluation**

(I) Manipulation group	(J) Manipulation group	MD (I-J)	SE
Positive priming - positive wording	Negative priming - positive wording	.0	.1
	Negative priming - negative wording	.8*	.1
	Positive priming - negative wording	.7*	.1
Negative priming - positive wording	Negative priming - negative wording	.7*	.1
	Positive priming - negative wording	.6*	.1
Negative priming - negative wording	Positive priming - negative wording	-.1	.1

Note. MD = mean difference; \*  $p < .05$ .

Regarding all group differences, the ad evaluation following positive worded ads compared to negative wording was significantly higher. Regarding the mood priming, there were no significant differences in ad evaluation (H2a). Therefore, H1a was accepted, while H2a was rejected. Results concerning the dependent variable behavioral intention (H1/2b) revealed no significant differences [ $F(3, 141) = 1.28, p = .283$ , partial  $\eta^2 = .027$ ] between all groups. Therefore, our hypotheses (H1/2b) were rejected. When looking at the group differences in ad evaluation (H3a) of congruent wording and mood versus incongruent wording and mood, the pairwise comparison shows no significant differences due to congruency. As depicted in table 1, positive congruency significantly differs from negative congruency but not the incongruent group negative priming – positive wording. Therefore, hypothesis H3a is rejected meaning there is no significant differences between congruent emotional messaging and incongruent emotional messaging.

The fourth hypothesis assumed that environmental awareness moderates the effect of wording on ad evaluation (H4a) and (H4b) behavioral intention. To test this assumption, we conducted two moderation analysis using model one of PROCESS (Hayes & Montoya, 2017) and confidence intervals of 95%. Mood was again implemented as a covariate. We used bootstrapping (5000 samples). The overall model for ad evaluation was significant,  $F(4, 142) = 17.24, p < .001$ , predicting 33.16 % of the variance. However, there was no significant interaction [ $\Delta R^2 = 0.0\%, F(1,142) = 0.08, p = .781$ ], meaning

environmental awareness did not moderate the effect of wording on the evaluation of the ad. Regarding the behavioral intention, the overall model was significant,  $F(4, 142) = 3.53, p = .001$ , predicting 12.64 % of the variance. But there was also no significant interaction [ $\Delta R^2 = 2.2\%, F(1, 142) = 2.74, p = .100$ ], meaning environmental awareness did not moderate the effect of wording on the behavioral intention. Thus, our fourth hypothesis is rejected, meaning there was no moderating effect of environmental awareness on the effect of wording on (a) ad evaluation and (b) behavioral intention.

### 4.3 Further analysis

As described by the theoretical assumption on planned behavior (Ajzen, 1991) positive attitudes and social norms affect the behavioral intention. To test this relation within our setting, we additionally conducted a multiple linear regression analysis for behavioral intention using ad evaluation (as a measure for attitude) and environmental awareness (as a measure for social norms) as predictors. The overall model was significantly explaining 27.0 % of the variance,  $F(2, 144) = 26.66, p < .001$ , adjusted  $R^2 = .26$ , indicating a high goodness-of-fit (Cohen, 1988). Environmental awareness ( $\beta = .20, p = .006$ ) and ad evaluation ( $\beta = .44, p < .001$ ) significantly predicted the intention to act more sustainable.

## 5. Discussion

The aim of this research was to investigate the reception of emotionally framed advertising and further intentions to act in a sustainability context, given its importance in the present era of global climate change. The findings of this work showed some significant relations, that confirm findings of prior research regarding persuasion and behavior but also contradict some of the hypothesis derived.

### 5.1 Effects of positive wording and emotional congruency

Our first hypothesis described expected differences due to positive or negative wording. We found a significant difference in terms of ad evaluation between the experimental groups. Overall, positive wording led to a better evaluation of the Instagram ads which undermines prior investigations (Kao & Du, 2020). Based on this, positive wording appears to be the deciding factor behind ad ratings. This is underlined by the fact that, in a negative mood, ads were rated more highly if they contained

positive wording. These significant findings reinforce the results of Percy (1982) that positively worded messages, in contrast to negatively worded messages, are evaluated and perceived more favorably. Our findings also stress the relevance of positive emotions in sustainability campaigns as proposed by Kao and Du (2020).

Furthermore, shifts in mood as proposed by our second hypothesis, did not have an effect on the evaluation of the ad. In contrary, unrelated to the mood, positive wording still led to significantly better evaluations of the ad. Contrary to our expectations, no effect could be found between the willingness to act (behavior) in terms of mood and wording. This contradicts the findings of Hine et al. (2016) that messages containing negative emotions or specific solution approaches increase a person's intention to act. An explanation could be provided by Young et al. (2010) who found that, when it comes to sustainable behavior in particular, there is a gap between the attitudes towards sustainable behavior and the actual execution of sustainable behavior. This might explain why wording or emotions can affect ad evaluations (Kao & Du, 2020), but not the intention to act upon it. Feldman and Hart (2021) provide another explanation for these outcomes, reporting that messages often entail overwhelm and rejection if the focus of a message is based on a threat. The issue of climate change and environmentally conscious behaviors may have been perceived as overwhelming. Consequently, no motivation to act would emerge in this instance. One could assume that the sustainability messages were not of personal relevance to some participants. Therefore, it can be further speculated that messages were processed at a peripheral level regarding the Elaboration likelihood model (Petty & Cacioppo, 1986). Another assumption would be that the suggested solutions were not taken seriously. For instance, individuals might think that the presented suggestions for products (reusable bag, coffee mug, and soap bar) do not represent realistic ways of acting in an environmentally conscious manner. Therefore, the ads may have only received peripheral attention. Consequently, a successful attitude change might only exist in an attenuated form. The intention to engage in sustainable behavior is weaker given the presumed peripheral processing. According to Ajzen (1991), strong intentions to act cannot be formed in this context.

In the third hypothesis, a higher ad rating and willingness to support was suspected regarding a match of valence between wording and mood. This assumption could not be confirmed within our study. This contradicts the assumptions we gained from

findings of Zarouali et al. (2020) who found matching of emotional wording based on personality preferences to be an effective approach within OPM. However, our design did not use manipulations based on personality traits but investigated the current mood state. Thus, it seems that matching of states within such setting does not influence advertising effectiveness. However, it needs to be addressed here, that the mood manipulation used in our study might not have been strong enough as the preliminary analysis did not show differences between mood groups which could also have impacted our results. In summary, the effect of mood matching within a social media setting might need further analysis to gain a better understanding whether assumptions that messages are rated according to mood to maintain congruence (Festinger, 1957; Osgood & Tannenbaum, 1955) are still valid in the era of digitization.

## 5.2 Influence of environmental awareness

Our fourth hypothesis anticipated a moderating effect of environmental awareness on the relationship between wording and ad evaluation, and behavioral intention. Overall, no moderating effects emanated from environmental awareness. This contradicts our assumptions that stated, when a topic is relevant, it leads to stronger attitude changes and behavioral intentions (Morosoli et al., 2022; Petty & Cacioppo, 1986). This could mean that the relevance of a topic might not be as meaningful as suggested or there are other prior factors (e.g., personality traits) that shape the processes of persuasion (Oreg & Sverdluk, 2013). Our results also do not coincide with those of Tykocinski et al. (1944), who discovered that individuals who act according to their ideals are more likely to be influenced by messages containing negative wording. We assumed that this would mean a moderating role of the wording effect. However, this relation could not be found.

As the theory of planned behavior (Ajzen, 1991) proposes attitudes and social norms to be predictors of the behavioral intention in our further analysis we implemented a regression model for this relation. The additional analysis confirmed the assumption, meaning that positive attitudes and awareness for a topic explain changes of behavior. This result not only confirms the theoretical assumption of Ajzen (1991) that positive attitudes predict the following behavior, it also means that the general awareness of a topic's relevance influences behavioral intentions. This significance confirms the results of (Schuman & Presser, 1981) who found that people who care about an issue will act accordingly.

All in all, the research showed that sustainability campaigns using emotional wording on social media could be an effective approach to enhance attitudinal evaluations. However, the potentials of OPM for matching specific attributes and content, cannot be weighed considering this study. In line with that, the further analysis does not fully explain the relations of persuasive communication, ad evaluations, and behavioral intentions, but shows, that awareness for environmental issues and positive evaluations predict the following behavior. This indicates that Ajzen's theory (1991) has relevance in an online setting, but further research is needed to enlighten the relations.

### 5.3 Limitations and further research

We based our research on an online-experimental design using different stimuli and a priming task as manipulation for our experimental groups. A first limitation to be mentioned in this setting is the selection of the priming method selection as our manipulation check could not confirm a sufficient mood difference through our manipulation. Nevertheless, priming is understood to mainly work subconsciously (Bargh et al., 1996) which might have hindered the explicit indication through the scale assessment. To better control for possibly insufficient manipulation, future research should include implicit measures to assess affective differences (e.g., stress level, arousal). Regarding the questionnaires used, it should be noted that good reliability could not always be ensured (e.g., Geiger & Holzhauser, 2019). Therefore, it should be noted that construction of valid measurements regarding topics like sustainability and environmental awareness are needed to gain more reliable results within this field. Also, our sample was not balanced regarding age and gender, which could have impacted some of the implications. Due to few studies within this context, it cannot be assumed that there are no differences in gender when evaluating environmental issues and emotional messages. Thus, a balanced sample could increase data quality and help when investigating probable gender related effects.

Our study provides some implications for further research within the context of framing, mood and sustainability advertising. It could not be confirmed that negative wording is more influential when fostering sustainable behavior, which was found in prior research (Hine et al., 2016). Therefore, it remains unclear how people can be motivated towards more sustainability. While OPM could be a relevant strategy to address different people in the appropriate way to enhance positive attitudes and by

that increase sustainable behaviors this cannot be fully answered by our results. Future studies can profit from our findings to derive more concrete relations of the relevant constructs. To analyze those in more detail those could be used in structural equation modelling to better understand the whole process.

### 5.4 Conclusion

This work aimed to investigate the reception of positive and negative framed ads in relation to positive or negative emotional states and the impact of matching both as OPM could enable. It was found that positive framing may influence the evaluation of OPM content but not (directly) the intention to act accordingly. However, ad evaluation turned out to predict behavioral intention. Conclusively, wording can be considered a possible way to enhance the effect of sustainable campaigns and thus lead to more sustainable actions. Thus, this paper contributes to previous research and offers new directions for future work.

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