

How to Communicate Sustainability in Tourism: Examining Value-Based Drivers for Advertising Effectiveness

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Abstract

As in many other industries, sustainability is becoming increasingly important in tourism. Travel agencies, hotels and tour providers try to differentiate themselves through eco travel offerings. The most effective communication of the added value of sustainability in tourism is still unexplored. It depends on the values and motives of consumers. Building on the Value Belief Norm Theory, this empirical study distinguishes between egocentric, altruistic and biospheric value orientation that may drive sustainable consumption. A between-subject experimental design of these three value orientations for a hotel advertisement shows that no orientation is generally superior in terms of advertising effectiveness. Rather, it depends on the compatibility of the personal value orientation and the value communication in the advertising. The observed data also indicates a correlation of gender and age with the effectiveness of sustainable tourism ads. In addition to practical implications, the study also makes a theoretical contribution by applying established research models to effectively communicate sustainability in tourism.

Keywords

value-based advertising, advertising effectiveness, eco-tourism, sustainability marketing

INTRODUCTION

In recent years, interest in sustainability and green marketing has grown in tourism. The guiding motive of sustainable development is becoming highly relevant from the political and the consumer's perspective (Lock, 2021). Already in 1980, Jungk's concept of soft tourism became popular, describing a way of traveling that considers environmental and social impacts on the vacation region as well as economic issues. The modern understanding of sustainable tourism considers the present and future economy (UNWTO, 2022). The needs of stakeholders, visitors, and host communities must be balanced with social and environmental impacts (Jungk, 1980; UNWTO, 2022). The focus on scarce resources and post-material needs challenges the discipline of marketing of the tourism industry. As awareness of sustainability increases, it is not surprising that travel agencies, hotels and tour providers try to differentiate themselves through eco travel offerings.

Many studies focus on the impact of values and motives on environmentally friendly behavior (Rokeach, 1973; Schwartz, 1977; Schwartz & Howard, 1984; Schwartz, 1992; Stern et al., 1999). However, the most effective communication of the added value of sustainability in tourism is still unexplored. Building on the Value Belief Norm Theory (VBN) by Stern et al. (1999), this empirical study examines the impact of egocentric, altruistic and biospheric value orientations for a hotel advertisement on advertising effectiveness. Accordingly, the study centers on the psychological concept of values. The VBN (Stern et al., 1999) builds on the Norm Activation Theory (NAT) of altruism by Schwartz (1977) and the New Environmental Paradigm Scale (NEP) by Dunlap and Van Liere (1978) (Stern, 2000). The NAT refers to the relation between moral-personal or -subjective motives, their activators and the resulting altruistic behavior (Schwartz, 1970; Schwartz, 1975; Schwartz, 1977; Schwartz & Howard, 1981). The NEP Scale is an instrument for measuring the endorsement of a pro-environmental worldview. Building on theories, the VBN of environmentalism by Stern et al. (1999) postulates that egocentric, altruistic and biospheric value orientations can influence sustainable consumption. Based on personal value orientations and knowledge of an ecological worldview, consumers perceive the consequences for themselves, for society as well as the biosphere. This awareness leads to responsibility for their own actions (Stern et al., 1999). Egocentric values can be assigned to self-enhancement and biospheric as well as altruistic values to self-transcendence (Schwartz, 1994; Stern et al., 1995). De Groot and Steg (2008) argue that strongly altruistic and biospheric value orientations tend to be predictors of pro-environmental behavior. Many studies also indicate a correlation of gender and age. Women have a stronger ecological attitude compared to men

(Zelezny et al., 2000; Dietz et al., 2002; Eagly et al., 2004) and younger people compared to the older generation (Cervinka et al., 2009).

This paper aims to provide guidance for the effective design of an advertisement in eco-tourism. Building on the Value Belief Norm Theory, we assess the effectiveness of different value-framed communications. We also consider the ratio of personal value orientation to the value communication in a hotel advertisement. Gender and age will be included in the analysis to allow the targeting of specific demographical groups.

Eco-tourism

In recent decades, the tourism industry has become one of the fastest growing and largest economic sectors worldwide (Kirstges, 1992; Rein & Strasdas, 2015). The tourism boom and the resulting intensive use of resources in tourist destinations (Fischer, 2014) require a more sustainable and environmentally friendly travel model (Rein & Strasdas, 2015). In 1980, the concept of soft tourism was introduced by Robert Jungk, which combines the environmental and social negative impacts on the host country with tourists needs. The Agenda 21 (1994) included guidelines for the travel and tourism industry of the United Nations for the first time (United Nations Sustainable Development, 1992). Nowadays, various definitions and guidelines of sustainable tourism exist. The UN World Tourism Organization (UNWTO, 2022) defines sustainable tourism as "tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities.". According to the UNWTO (2022), eco-tourism is divided into three main criteria, which are conservation of resources, conservation of cultural heritage, and ensuring sustainable long-term economic operations as well as poverty alleviation of host communities. Economy, ecology and sociality are in a dynamic and interdependent relationship, which have to take into account equally (UNWTO, 2022).

Due to the lack of individual offers by tour operators, customer loyalty in tourism is relatively low (Kirstges, 1992). According to Kirstges (1992), a sustainable offer can create, in addition to resource and environmental protection, a sustainable corporate identity, positive media impact and attraction as well as retention of pro-environmental customers. Sustainability is becoming increasingly important as a decision criterion when choosing a vacation (Lock, 2021) and must be communicated in a promotionally effective way. For this reason, the impact of values and value-based drivers should be examined.

Theoretical foundations

The present study is based on value theories that use value orientation as an explanatory approach to behavior. The term "values" is subject to a variety of definitions, about which unconformity exists (Rohan, 2000). In relation to the research project of the advertising effect of values in eco-tourism, this section will focus on the psychologically based concept of values. Rokeach (1973) assumes that a numerus of ranked individual values determines the inner basic attitude of a person and are guiding principles. Schwartz and Howard (1987) add to the definition that values refer to desirable behaviors or goals and apply across situations.

According to Schwartz's theory of individual values (1992), ten main values exist and can be grouped into four overarching dimensions: openness to change, self-transcendence, conservation, and self-enhancement. All of them complement and compete to each other (Schwartz, 1992). Schwartz (1992) proved the conformity of the value structure in different countries. Within the study, he also explored a possible relationship between external variables and the participants' individual guiding value principles. He assumes that people attach the highest importance to altruistic motives with increasing age (Schwartz, 1992). The dimensions of self-transcendence and self-enhancement are essential for the advertising research in eco-tourism (Stern & Dietz, 1994).

Values represent certain personal standards that act as individual guiding principles, while norms define how a person should behave appropriately in a particular situation (Schwartz & Howard, 1981; Thøgersen, 2006). Therefore, the influence of normative beliefs on personal environmental behavior should also be considered. According to the Norm Activation Theory (Schwartz & Howard, 1981), moral motives can be activated by certain conditions and can influence altruistic and environmentally friendly behavior. Personal norms address one's own value system, while subjective norms are based on social values (Schwartz & Howard, 1981). Motives are triggered as soon as the individual perceives a problem and realizes the consequences of his or her behavior. Before behavioral change, costs and benefits are evaluated, considering the different moral motivations (Matthies, 2005).

To assess the problem and their own impact, the individual must be aware of the threat to the ecosystem (Dunlap & Van Liere, 1978; Schwartz & Howard, 1981; Matthies, 2005). The New Ecological Paradigm Scale (NEP) by

Dunlap et al. (2000) is considered the most widely used instrument for measuring endorsement of a pro-environmental worldview (Hawcraft & Milfont, 2010). Based on a five-point Likert scale, it should be possible to identify the level of the environmental knowledge and awareness (Dunlap & Van Liere, 2008). The actual effect of high measured environmental awareness on cross-domain pro-environmental attitudes is still unexplored. In environmental psychology, the concept of attitude seems to be the most promising and closest antecedent to behavior (Tarfaoui & Zkim, 2018). According to the correspondence principle, minimalistic correspondence between measured attitudes and behavior can be expected (Ajzen & Fischbein, 1977). Related to environmental behavior, some meta-analyses have demonstrated a gap between consumers' attitudes and real purchase behavior in daily decisions (Schäufele & Hamm, 2018) as well as a weak to nonexistent relationship between environmental attitude and ecological behavior (Tarfaoui & Zkim, 2018).

Building on the previously mentioned theories, the Value Belief Norm Theory was developed by Stern et al. (1999). With the VBN, the egocentric as well as biospheric value orientation is added to the model (Stern et al., 1995; De Groot & Steg, 2008). Altruistic or biospheric motives represent self-transcendence and egocentric or hedonistic motives represent self-enhancement. The VBN model consists of a causal impact chain with five steps, supported by empirical studies (Stern et al., 1995) and visualized in Figure 1. Personal value orientations (altruistic, egocentric, biospheric) form the foundation of the model. Frequently, one orientation is dominant (Lehmann, 1999). As soon as a person has enough information or knowledge to implement an ecological worldview (Dunlap & Van Liere, 1978), the person can perceive self-related and environmental consequences and attributes responsibility to its actions (Schwartz & Howard, 1981). This process stimulates the personal moral norms from which pro-environmental behavior results (Stern et al., 1999). Altruistic and biospheric motivated values already imply an environmentally friendly attitude, which tends to favor environmentally friendly behavior as well (De Groot & Steg, 2008). In contrast, it can be assumed that values of a selfish nature compete with environmentally friendly behavior (Schwartz, 1992). By strategically framing messages, marketers can leverage the effectiveness of value orientations to promote sustainable decisions (Ungemach et al. 2018). The Value Belief Norm Theory is suitable for sustainable tourism studies because its theoretical background has been used previously in other studies of travel behavior (Klößner & Matthies, 2004; Lind et al., 2015).

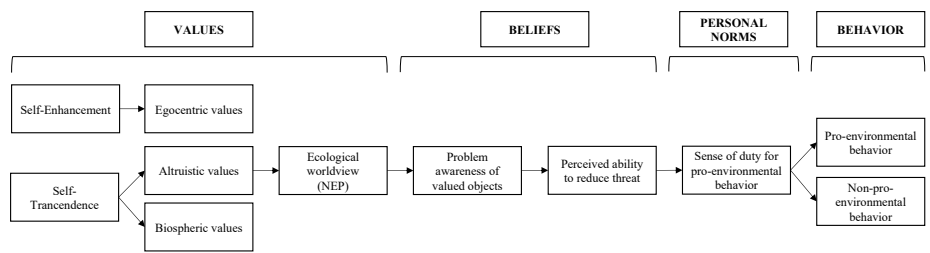


Figure 1. The Value Belief Norm Theory (Stern et al., 1999)

Numerous studies also indicate a correlation of external factors, including gender and age. Women care more about social (Eagly et al., 2004) and environmental issues (Zelezny et al., 2000) compared to men. Stern et al. (1993) also point out that women, especially mothers, pay more attention to health and safety risks. In addition, there are assumptions that women are educated in childhood to act in a more socially responsible manner (Cervinka et al., 2009). People develop the capability for sustainable behavior between four and eighteen (Gifford, 1982). The strength of expression depends on the age. Cervinka et al. (2009) reports a significant difference between the 26- to 44-year-old age group, which doesn't feel as connected to nature as the 45-plus-year-old age group. Diamantopoulos et al. (2003) assume that younger people have a better knowledge of environmental issues and a higher pro-environmental attitude than older people. Nevertheless, the older generation recycles more frequently than the younger generation, which can be explained by their striving to fulfill social norms (Diamantopoulos et al., 2003). As some of the mentioned studies were conducted two decades ago, it makes sense to investigate the impact of gender and age in today's society.

Within the context of this study, the importance of the Value Belief Norm Theory and the correlation of external factors is particularly strong. Environmentally friendly behavior depends on the values and motives of consumers. Moral, social norms and personal values are the basis of ecological purchase decisions and give the consumer a first motivational impulse, for sustainable behavior. Building on the VBN, this empirical study distinguishes

between egocentric, altruistic and biospheric value orientation that may drive advertising effectiveness, especially sustainable consumption.

METHODS

In this experimental study, we test the effect of three advertising messages, based on the three value orientations in the VBN theory, on consumers perception and intention. In our scenarios, we show an advertisement for a trip in a sustainable hotel in Austria. As outcome variables to measure the advertisement effectiveness we used the following constructs: liking, purchase intention, triggered euphoric feelings, and ecological attitude.

To investigate the impact of value-based advertising messages, the following hypotheses are derived from the theoretical foundations.

Based on the Value Belief Norm Theory (Stern et al., 1993; Stern et al. 1999) and De Groot and Steg's (2010) assumptions that pro-environmental behavior is dependent on personal value orientation, four hypotheses regarding the value fit are proposed:

Hypotheses 1 (H1): *Customers prefer an advertisement more if it meets their personal value orientation than one that deviates.*

Hypotheses 2 (H2): *Customers are more likely to intend to make a purchase if an advertisement fits their personal value orientation than one that deviates*

Hypotheses 3 (H3): *People who favor an altruistic-framed advertisement are more environmentally conscious than people who favor an egocentric-framed advertisement.*

Hypotheses 4 (H4): *People who prefer a biospheric-framed advertisement are more environmentally conscious than people who prefer an egocentric-framed advertisement.*

As previously described, several studies show correlations between gender (Zelezny et al., 2000; Dietz et al., 2002; Eagly et al., 2004) and age (Diamantopoulos et al., 2003; Cervinka et al., 2009). The studies were conducted years ago, so that we analyze demographic factors to replicate or contradict past findings.

Hypotheses 5 (H5): *Women rate the presented advertisements for sustainable travel more positively than men.*

Hypotheses 6 (H6): *The younger generation (18-30 years) rates the presented advertisement for sustainable travel more positively than the older generation (31- over 50 years).*

We developed three different advertisement stimuli, one for each value orientation of the VBN theory. Table 1 show the three different versions. The content of the egocentric-framed promotion was based on treating oneself through a sustainable journey. In the altruistic-framed promotional message, sustainable travel was described as a way to protect and preserve resources for future generations. The content of the biosphere-framed advertisement emphasized the protection and preservation of the environment and biodiversity through sustainable travel. The versions differ in their promotional slogan, but not in the hotel features that were included to support the slogan.

Table 1. Value framed advertising messages as stimuli (Stern et al., 1999)

Grouping variable	Value framed advertising messages
Egocentric-based content	Book your sustainable travel and treat yourself.
Altruistic-based content	Book your sustainable travel and secure the well-being of future generations.
Biospheric-based content	Book your sustainable travel and protect our planet.

Table 2 presents the dimensions and scales that we used to measure the dependent variables (advertising effectiveness indicators) of the model. We examined general attitude (Chen & Wells, 1999), triggered feelings (Edell & Burke, 1987), and ecological attitude (Haws et al., 2014) as indicators toward advertising effectiveness of value-framed ads. The items to measure the latent constructs were derived from research studies to ensure proper reliability and validity. Furthermore, we tested the items in an online pretest study. As the items and scales were partially modified to fit our specific context, we tested them for reliability in SPSS. To measure the strength of the attitude we chose the Likert scale from "strongly agree" to "strongly disagree".

Table 2. Advertising effectiveness indicators measures

Advertising effectiveness indicators/ outcome variables		Measurement definition	
Attitude towards the value-framed ad (Chen & Wells, 1999)	Liking	A single-item seven-point scale	My impression of the presented offer is positive.
	Purchase intention	A single-item seven-point scale	I would book the presented offer.
Triggered feelings towards the value-framed ad (Edell & Burke, 1987)	Euphoric feelings	A multiple-item five-point scale	I felt interested.
			I felt excited.
			I felt inspired.
Triggered ecological attitude (Haws et al., 2014)	Ecological attitude	A multiple-item seven-point scale	I use do not harm the environment.
			My purchase habits are affected by my concern for our environment.
			I would describe myself as environmentally responsible.
			I am willing to be inconvenienced in order to take actions that are environmentally friendly.

The experiment was conducted as follows: At the beginning, participants were randomly allocated to one of the three groups with different value orientations. They were not aware of their group. The respondents saw one of the advertising versions in a fictitious scenario in which they were looking for ideas for their next trip.

After exposure to the advertisement, a manipulation check was used to determine whether the context of the content was clear to the participants.

To investigate the general effect on advertising effectiveness of these three value orientations, respondents were asked to rate their first impression and the booking probability on a seven-point scale. To assess triggered feelings, Edell and Burke's scale (1987) measuring euphoric feelings was compressed into three items, which had to be rate on a five-point scale. Subsequently, participants saw all three versions and were asked to rank them according to their preferences.

Afterwards, the respondents' pro-environmental behaviors were measured. Four items were selected and slightly modified from the Green Consumer Values scale according to Haws et al. (2014). Participants rated them on a seven-point Likert scale. Finally, the travel behavior (travel frequency and travel motives (Braun, 1993) of the respondents, and socio-demographic factors such as gender, age, education and parenting, were assessed.

FINDINGS

This section presents the results of the research and tests the six hypotheses, drawing on the conceptual and practical resources described previously.

According, to the descriptive analysis (Table 3), the sample had more females (74.88%) than males (25.12%). Compared to the number of German women using the Internet, the female gender is overrepresented in this study. The 18 to 30-year-old age group had the highest percentage (61.20%), followed by the 31 to 40- (13.40%), the 41 to 50- (12.50%) and the over 50-year-old-age-group (13%). The higher educated persons are overrepresented in the study (87%). Only a quarter of the respondents are parents (25.6%). The evaluation of travel behavior shows that the majority of respondents (86.15%) travel at least once a year. Business trips were excluded. At the beginning of the experiment, participants were randomly divided into three different groups. Group one (38.9%) was shown the advertisement with egocentric-based content, group two (36.1%) with altruistic-based content and group three (25%) with biospheric-based content.

Table 3. Descriptive characteristics of the sample

Characteristics	Category	N	% of Total
Gender	Female	161	74.5 %
	Male	54	25.0 %
	Diverse	1	0.5 %
Age	18 to 24	66	30.6 %
	25 to 30	66	30.6 %
	31 to 40	29	13.4 %
	41 to 50	27	12.5 %
	> 50	28	13.0 %
Education	Below Graduation	28	13.0 %
	Above Graduation	188	87.0 %
Parenting	Childless	160	74.4 %
	Parents	55	25.6 %
Travel frequency	> Once a year	119	55.1 %
	Once a year	67	31.0 %
	Every 2 to 3 years	26	12.0 %
	Every 5 to 10 years	3	1.4 %
	Never	1	0.5 %
Grouping variable	Egocentric-framed content	84	38.9 %
	Altruistic-framed content	78	36.1 %
	Biospheric-framed content	54	25.0 %

The Cronbach's alpha coefficient is used to estimate the reliability of scales. The scales for measuring environmentally friendly behavior ($\alpha=.801$) and euphoric feelings ($\alpha=.794$) show a good reliability despite modification (Bagozzi & Yi, 1988; Cortina, 1993).

The results from the manipulation check indicate that the value orientations were identified with high confidence by a majority of participants (biospheric=92.6%; altruistic=85.9%; egocentric=83.4%).

General reactions to the value orientations

The general rating of advertisements with different value orientations is measured by liking and purchase intention. Moreover, the study examines the differences in the euphoric feelings triggered by the three displays. The results presented in Table 4 show slight differences between the value orientations in terms of the liking, purchase intention and the triggered feelings, which are tested for significance using the one-factor ANOVA.

Table 4. General reactions of the value-based content

Dependent Variables	Grouping variable	N	Mean	SD	SE
Liking	Egocentric-framed content	84	3.11	1.25	0.137
	Altruistic-framed content	78	2.94	1.07	0.122
	Biospheric-framed content	54	2.91	1.01	0.138
Purchase intention	Egocentric-framed content	84	4.02	1.67	0.182
	Altruistic-framed content	78	3.68	1.69	0.192

	Biospheric-framed content	54	3.89	1.69	0.230
Euphoric feelings	Egocentric-framed content	84	2.83	1.042	0.114
	Altruistic-framed content	78	2.64	0.907	0.103
	Biospheric-framed content	54	2.80	0.976	0.133

Liking and purchase intention: Seven-point Likert scale (1="strongly agree"; 7= "strongly disagree")

Euphoric feelings: Five-point Likert scale (1="strongly agree"; 5= "strongly disagree")

For purchase intention, homogeneity of variance, tested by Leven's test, can be assumed. While a normal distribution according to the Shapiro-Wilk test is rejected. Normal distribution and variance homogeneity are not acceptable for parametric testing of liking. The results of the Kruskal-Wallis test and the robust ANOVA show that the slight differences between the value orientations in advertising purchase intention and linking are not statistically significant ($p > .05$). Mean values of experienced feelings within the three randomized groups show that euphoric feelings were somewhat triggered in all groups, with the altruistic content group standing out slightly ($M=2.64$, $SD=1.04$). Overall, our data indicates that no value orientation is generally superior in terms of advertising effectiveness. Neither regarding triggered feelings nor regarding liking and purchase intention.

Value Fit of own orientation and communicated orientation

According to Lehmann (1999), each person has a particularly strong value orientation. Therefore, we tested whether people react more positively to an advertisement based on their personal value orientation. At the end of the survey, respondents were presented with all three advertisements of the different value orientations, which they were asked to rank according to their own preference. Liking and purchase intention ratings were again assumed to be dependent variables.

Using the one-factor ANOVA, it was tested whether the mean values of the groups that had a value fit or a value deviation differed statistically significantly. In order to exclude manipulation at its maximum, all participants of the group who did not associate the display with the correct value-based content were excluded from the following evaluation. Table 5 shows euphoric feelings, liking and purchase intention depending on the value fit of the displayed advertisement.

Table 5. Results of value fit and deviation of the value orientation

Dependent group	Grouping variable	Favorite	N	Mean	SD	SE
Liking	Egocentric-framed content	Egocentric-framed content	32	2.5	1.136	0.201
		Altruistic-framed content	24	3.21	1.215	0.248
		Biospheric-framed content	14	3.43	0.938	0.251
Liking	Altruistic-framed content	Egocentric-framed content	23	2.96	1.186	0.247
		Altruistic-framed content	20	2.65	0.933	0.209
		Biospheric-framed content	24	2.79	0.977	0.199
Liking	Biospheric-framed content	Egocentric-framed content	19	2.95	1.079	0.247
		Altruistic-framed content	15	2.47	0.834	0.215
		Biospheric-framed content	16	3.00	0.966	0.242
Purchase intention	Egocentric-framed content	Egocentric-framed content	32	3.25	1.320	0.233
		Altruistic-framed content	24	4.25	1.984	0.405
		Biospheric-framed content	14	4.21	1.188	0.318
Purchase intention	Altruistic -framed content	Egocentric-framed content	23	3.83	1.875	0.391
		Altruistic-framed content	20	3.35	1.137	0.254
		Biospheric-framed content	24	3.17	1.736	0.354

Purchase intention	Biospheric-framed content	Egocentric-framed content	19	4.11	1.941	0.445
		Altruistic-framed content	15	3.47	1.457	0.376
		Biospheric-framed content	16	3.69	1.580	0.395
Euphoric feelings	Egocentric-framed content	Egocentric-framed content	32	2.35	0.927	0.164
		Altruistic-framed content	24	3.00	1.049	0.214
		Biospheric-framed content	14	2.81	0.874	0.234
Euphoric feelings	Altruistic-framed content	Egocentric-framed content	23	2.74	0.926	0.193
		Altruistic-framed content	20	2.27	0.627	0.140
		Biospheric-framed content	24	2.50	0.948	0.193
Euphoric feelings	Biospheric-framed content	Egocentric-framed content	19	3.05	0.925	0.212
		Altruistic-framed content	15	2.49	0.950	0.245
		Biospheric-framed content	16	2.65	0.985	0.246

Liking and purchase intention: Seven-point Likert scale (1="strongly agree"; 7= "strongly disagree")

Euphoric feelings: Five-point Likert scale (1="strongly agree"; 5= "strongly disagree")

We tested normal distribution and variance homogeneity, which are slightly injured for parametric testing. According to the results of the Kruskal-Wallis test, the differences of the liking and purchase decision of the advertising message with egocentric motivation are significant ($p < .05$). People who prefer egocentric-based content were significantly more convinced by the advertisement with value fit ($M=2.5$, $SD=1.136$) than people who prefer biospheric values ($M=3.43$, $SD=0.938$) (Table 6). It is a weak effect size ($f=0.127$) (Cohen, 1992). The results of the robust ANOVA show a significant difference in purchase intention ($p < .05$). However, the analyses of the post hoc test using the trimmed mean, do not confirm the significant results ($p > .05$). The respondents of the groups presented with altruistic- and biosphere-framed advertising content show no significant differences between a value fit or no fit in their ratings ($p > .05$).

In addition, we examined the ratings of euphoric triggered feelings. Statistically significant results can be identified in the egocentric-framed advertisement group related to the euphoric feelings using the Kruskal-Wallis test due to the violated requirement for normal distribution. Individuals with egocentric value fit rate their euphoric feelings ($M=2.35$, $SD=0.927$) significantly better than individuals who prefer the altruistic-framed display ($M=3.00$, $SD=0.874$). The groups presented with altruistic- and biosphere-framed advertising content show no significant differences related to their positive feelings ($p > .05$).

Table 6. ANOVA results of the egocentric-framed advertisement group

Dependent variable	Groups	Mean Difference	p
Liking	Egocentric-framed content/ Biospheric-framed content	-0.93	0.02
Euphoric feelings	Egocentric-framed content/ Altruistic-framed content	-0.65	0.033

External factors on environmental behavior

We also measured the influence of the external factors gender and age on the respondents' reactions to the advertisement and on their environmental behavior. The prerequisites for the t-test and the ANOVA were checked and largely accepted. The significant differences are presented in Table 7 and 8.

Women evaluate their ecological attitude significantly better ($M=2.48$, $SD=0.929$) than men ($M=2.79$, $SD=0.818$). Cohen's d indicates a small to moderate effect size ($d=0.335$) (Cohen, 1992). The liking and the purchase intention of the advertisement differs significantly with a medium effect size ($d > 0.40$) between women and men ($p < .05$). Women ($M=2.88$, $SD=1.10$) like the trip significantly more than men ($M=3.33$, $SD=1.18$). In

addition, females (M=3.68, SD=1.68) indicated a significantly higher purchase intention compared to males (4.43, SD=1.60).

In terms of age, the participants were separated into two groups (18-30 years and 31-50+ years). The younger sample (M=2.80, SD=1.10) rated the advertisement significantly better than the older respondents (M=3.31, SD=1.11). Cohen's d is small to moderate (d=0.382) (Cohen, 1992). The results of the purchase intention do not differ significantly (p>.05). We also found significant differences of the liking between childless respondents (M=2.86, SD=1.13) and parents (M=3.38, SD=1.05) with a medium effect size (d=0.467). Furthermore, we determined that parents (M=4.31) declined to book the trip significantly more often compared to childless participants (M=3.71, SD=1.13). Cohen's d is small to moderate (d=0.357) (Cohen, 1992). The educational level does not seem to have an effect on the reactions towards advertisement for sustainable hotels (p>.05).

Finally, we tested the relationship between personal value orientation and environmentally friendly behavior based on self-reported information. Because normal distribution and variance homogeneity were not given, we tested the statistical significance of differences between value orientations using the robust ANOVA. The post hoc tests confirm the significant difference between the egocentric orientation and the altruistic as well as the biospheric orientation. According to this, people with altruistic or biospheric value attitudes rate their sustainable behavior higher than egocentrically motivated people. The difference between altruistic and biospheric motives cannot be confirmed as statistically significant (p>.05).

Table 7. Significant results of external factors

Dependent variable	Grouping variable	Category	N	Mean	SD	SE
Ecological attitude	Gender	Female	161	2.48	0.929	0.073
		Male	54	2.79	0.818	0.111
Liking	Gender	Female	161	2.88	1.10	0.086
		Male	54	3.88	1.18	0.161
Purchase intention	Gender	Female	161	3.68	1.68	0.132
		Male	54	4.43	1.60	0.217
Liking	Age	30 and younger	132	2.80	1.10	0.009
		above 30 years	83	3.31	1.11	0.121
Liking	Parenting	Childless	160	2.86	1.13	0.089
		Parents	55	3.38	1.05	0.141
Purchase intention	Parenting	Childless	160	3.71	1.63	0.128
		Parents	55	4.31	1.77	0.239
Ecological attitude	Personal Value Orientation	Egocentric-framed content	82	2.88	1.009	0.111
		Altruistic-framed content	68	2.48	0.772	0.093
		Biospheric-framed content	66	2.24	0.783	0.097

Ecological attitude, liking and purchase intention: Seven-point Likert scale (1="strongly agree"; 7="strongly disagree")

Table 8. Significant t-tests/ANOVA results by external factors

Dependent variable	Grouping variable	Independent groups	Mean Difference	p
Ecological attitude	Gender	Female/Male	-0.31	0.034

Liking	Gender	Female/Male	-0.451	0.011
Purchase intention	Gender	Female/Male	-0.749	0.005
Liking	Age	30 and younger/ above 30 years	-0.49	0.007
Liking	Parenting	Childless/Parents	-0.518	0.003
Purchase intention	Parenting	Childless/Parents	-0.595	0.023
Ecological attitude	Personal Value orientation	Egocentric/ Altruistic	0.5	0.015
		Egocentric/ Biospheric	0.64	<.001

DISCUSSION AND CONCLUSIONS

A between-subject experimental comparison of these three value orientations for a hotel advertisement shows that none of these orientations is generally superior in terms of advertising effectiveness. The evaluation of the liking and the purchase intention show no statistically significant differences. Building on the Value Belief Norm Theory (Stern et al., 1999), we can largely confirm the first and second hypothesis. If the values match, customers are more likely to like an advertisement and more willing to book the sustainable travel offer than if the communicated values differ from the personal orientation. In particular, there is a statistically significant difference between the value fit and the value deviation in the case of ego-driven advertisements of a sustainable trip offer. Accordingly, an egocentric-framed advertising message has a significantly **positive** effect on (potential) customers' perception who have a **egocentric** value orientation. For the experimental groups confronted with the altruistic and biospheric advertisements, no statistically significant difference in general scores can be demonstrated. The mutual relationships of the different value types according to Schwartz (1977) represent an explanatory approach to the results. The altruistic and biospheric value orientations belong to the self-transcendence and complement each other. The self-transcendence is competitively related to the self-enhancement, to which the egocentric orientation belongs to. **From our study we derive that the ad's value-frame does not matter for people with an altruistic or biospheric value orientation, as they rate sustainable tourism ads positively regardless of the value-frame. Against this the value fit is important for people with an egocentric value orientation and increases the advertising effectiveness significantly.**

hat gelöscht: negative

hat gelöscht: biospheric

Stern et al. (1993) assume that the three value orientations vary in their impact on environmentally friendly behavior. Our results support the assumption of De Groot and Steg (2010) that altruistic and biospheric value orientations are antecedents of environmentally friendly behavior. Altruistic and biospheric oriented respondents show more environmental conscious behavior than egoistic oriented persons (Table 7 and 8). This confirmed the third and fourth hypothesis that people who favor an altruistic- or biospheric-framed advertisement are more environmentally conscious than people who favor an egocentric-based advertisement.

Numerous studies show that women have a more environmentally conscious intention than men. Our results support this assumption (hypothesis 5). Women rate sustainable travel significantly better than men. The advertising impact of sustainable selling points is greater for women than for men. The study also confirms the sixth hypothesis which says that sustainable travel is in general more appreciated by younger people than by the older sample. According to Diamantopoulos et al. (2003), the younger generation has a broader environmental knowledge and awareness.

For sustainable marketing, the findings indicate that value-based communication alone is not enough. It depends on the value fit of the target group, which generates positive feelings, especially in the egocentric target group. Nevertheless, the value orientation of the target group needs to be considered for the advertising strategy. People with the value type self-transcendence (Schwartz, 1994; Stern et al., 1995) are significantly more likely to reject the egocentric-based offers compared to the value-identical customers. Based on the present results and past studies (Eagly et al., 2004; Zelezny et al., 2000), the communication of the value type self-transcendence should be used more for young and female target groups. Our results also show that sustainable tourism is rated positively overall. We also examined the current travel motives of the respondents and found out that motives such as resource conservation were reported as a relevant criterion in the selection of offers. Sustainable travel is

especially chosen by altruistic and biosphere-motivated individuals. Therefore, we generally propose that sustainable travel offers should be established and effectively communicated.

This research has numerous limitations. For the present between-subject design there are some disadvantages. In general, statistical procedures with between-subject designs have less statistical power than studies with within-subject designs. It should be noted that the women and the younger generation are overrepresented in the present study. Another important limitation is that our data was generated through an online experiment. This typically leads to a higher internal validity, but lacks external validity compared to a field experiment. A follow-up study as field experiment (e.g. as A/B/n testing on a travel portal) is recommended. In addition, the changing economic situation in Europe should be taken into account. The study was conducted before the Covid-19 pandemic and the ongoing inflation. These external shocks may have changed the travel budget, frequency, motives and choice behavior.

Further studies should investigate the relationship of value orientations and travel motives. Additionally, it would be interesting to see if the level of knowledge on climate change and environmentally friendly behavior influences the value orientation and the advertising effectiveness. Furthermore, the influence of the available travel budget can be examined.

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APPENDIX

Versions of the advertisement as stimuli

Nachhaltig verreisen um Ihnen & Ihrer Gesundheit etwas Gutes zu tun.

- ✓ Wolena Schlafbalance-System für gesunden Schlaf
- ✓ Natürliche Bettwaren – auch Allergiker geeignet
- ✓ Gesunde & frische Küche aus hochwertigen Produkten
- ✓ Spa & Wellnessbereich mit Bio-Sauna & Naturbadeteich
- ✓ Beautyanwendungen mit Naturkosmetik

Herzlich Willkommen im Natur & Biohotel Bergezeit!

Nachhaltiger Urlaub im naturbelassenen Tannenheimer Tal in Österreich bedeutet **Wohlbefinden** und **Regeneration** im Einklang mit der Natur.

Im Fokus steht ein ganzheitlicher Ansatz, der **Achtsamkeit** und **Gesundheit** fördert und den **Menschen in den Mittelpunkt** rückt.

Erleben Sie bei uns eine völlig neu interpretierte Art des nachhaltigen Reisens & tun sich und ihrer Gesundheit etwas Gutes.

Wir freuen uns, Sie bald in unserem Hotel begrüßen zu dürfen!



Nachhaltig verreisen um Ressourcen zu schonen für noch folgende Generationen.

- ✓ Wolena Schlafbalance-System für gesunden Schlaf
- ✓ Natürliche Bettwaren – auch Allergiker geeignet
- ✓ Gesunde & frische Küche aus hochwertigen Produkten
- ✓ Spa & Wellnessbereich mit Bio-Sauna & Naturbadeteich
- ✓ Beautyanwendungen mit Naturkosmetik

Herzlich Willkommen im Natur & Biohotel Bergezeit!

Nachhaltiger Urlaub im naturbelassenen Tannenheimer Tal in Österreich bedeutet **Wohlbefinden** und **Regeneration** im Einklang mit der Natur.

Im Fokus steht ein ganzheitlicher Ansatz, der **Achtsamkeit** und **Gesundheit** fördert und den **Menschen in den Mittelpunkt** rückt.

Erleben Sie bei uns eine völlig neu interpretierte Art des nachhaltigen Reisens & tun sich und ihrer Gesundheit etwas Gutes.

Wir freuen uns, Sie bald in unserem Hotel begrüßen zu dürfen!



Group 1: Ego-centric-framed stimulus

Group 2: Altruistic-framed stimulus

Nachhaltig verreisen um unsere Natur & Artenvielfalt zu schützen und erhalten.

- ✓ Wolena Schlafbalance-System für gesunden Schlaf
- ✓ Natürliche Bettwaren – auch Allergiker geeignet
- ✓ Gesunde & frische Küche aus hochwertigen Produkten
- ✓ Spa & Wellnessbereich mit Bio-Sauna & Naturbadeteich
- ✓ Beautyanwendungen mit Naturkosmetik

Herzlich Willkommen im Natur & Biohotel Bergezeit!

Nachhaltiger Urlaub im naturbelassenen Tannenheimer Tal in Österreich bedeutet **Wohlbefinden** und **Regeneration** im Einklang mit der Natur.

Im Fokus steht ein ganzheitlicher Ansatz, der **Achtsamkeit** und **Gesundheit** fördert und den **Menschen in den Mittelpunkt** rückt.

Erleben Sie bei uns eine völlig neu interpretierte Art des nachhaltigen Reisens & tun sich und ihrer Gesundheit etwas Gutes.

Wir freuen uns, Sie bald in unserem Hotel begrüßen zu dürfen!



Group 3: Biospheric-framed stimulus