

ITW Working Paper Series

ISSN: 1662-9019

ITW Working Paper Tourism 001/2013

Luzern, 12 November 2013

Effective Communication of Sustainable Tourism Products to Influence Purchase Intentions

Authors

Roger Wehrli, Sascha Demarmels, Julianna Priskin, Dorothea Schaffner, Jürg Schwarz, Fred Truniger, Jürg Stettler¹

Lucerne University of Applied Sciences and Arts
Institute of Tourism ITW
Rösslimatte 48
6002 Lucerne, Switzerland

Contact Author

Roger Wehrli

E-mail: roger.wehrli@hslu.ch
Phone: +41 41 228 42 83

Abstract

This study explores the best communication style to reach different international tourism markets to understand how purchase intentions could be better influenced in travel brochures. A multi-phase empiric study with a pre-test experiment, testing for perceived emotionality and rationality, and a choice experiment was conducted to test how Swiss, German, British and US travellers could be influenced by visual and textual communication elements in a fictive travel brochure, designed for a typical beach holiday in Menorca, but managed according to sustainability principles. In the choice experiments, 3006 responses were obtained from an online survey in the four countries. Results confirm a general preference for emotionally laden communication styles for sustainable tourism products while respondents were indifferent about the emotionality of the communication about standard product features. Additionally, respondents did not show a preference for including a graph explaining the sustainability of the product.

Keywords

Sustainable tourism, communication, marketing, empirical survey, choice experiment, conjoint

¹ The authors would like to thank Martin Barth and all collaborators of this research project, especially Reto Alborghetti, Sonja Kolberg, Kaj Lehman, Richard Abplanalp and Douglas MacKevett. We would also like to thank all the participants of several seminars for their helpful comments. A special thank you goes to MyClimate, GIZ and ITB Berlin for supporting this study.

1. Introduction

Since sustainable development is an internationally accepted paradigm for the tourism sector (UNWTO, 2012), various improved and more responsibly managed products are offered to consumers. To date these sustainable tourism products have been strongly associated with a limited market niche, whereby companies are faced with marketing and communication challenges to reach broader tourism markets. This is because consumers are often unable to see, recognise or understand relevant sustainability attributes of such tourism products unless explicitly communicated to them (McDonald, 2006). Although companies can clearly communicate to general stakeholders about their sustainability performance via established sustainability reporting frameworks such as the Global Reporting Initiative, there is currently no established scientific understanding how to communicate to consumers to influence their choice in favour of sustainable tourism products. In this context, this paper is a novel and innovative contribution as it explores the best communication style to reach different international tourism markets by empirically examining the influence of different levels of emotional or rational elements on consumer purchase choice of a beach holiday.

2. Literature Review

Sustainable tourism is defined as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, and the environment and host communities" (UNWTO, 2013). Thus, sustainable tourism products are managed to result in low and efficient natural resource use in terms of energy and water, have low solid, liquid and gaseous waste output including greenhouse gas emissions, and measurable positive socio-economic impacts for host communities, because of fair and equitable treatment of employees, and net positive contributions to the local economy. However, these attributes can remain invisible to consumers and they might never directly derive an added benefit value by knowing the distinct product attributes unless clearly and explicitly communicated (Millar & Baloglu, 2011; Roth, 2010). When explicitly communicated, it may still be that the product's sustainability attribute communication requires significant prior knowledge and or cognitive effort to understand and even already sustainability aware consumers might prefer simple information (Young, Hwang, McDonald, & Oates, 2010).

Sustainability marketing aims to create awareness about pro-sustainability products, and secondly to increase their purchasing, thereby fostering more sustainable consumer behaviour (Belz & Peattie, 2012). Although research into pro-sustainability or green consumerism dates over two decades (Cherian & Jolly, 2012; Young et al., 2010) in a tourism context it remains a fairly new field with just a handful of papers published on the topic (Han, Hsu, & Sheu, 2010; Lee, Hsu, Han, & Kim, 2010).

As sustainable consumer choice is likely to involve a mix of emotional and rational decision-making, the marketing elements for any product need to consider the content of marketing materials (Jackson, 2004; Kim, 2012; Walters, Sparks, & Herington, 2012). The marketing and advertising literature has extensively studied the emotional/rational framework (Albers-Miller & Stafford, 1999; Batra & Ray, 1986; Kotler & Armstrong, 1994). Based on content, most marketing communication can be divided into two categories (R. Bagozzi, 1997; R. P. Bagozzi, Gopinath, & Nyer, 1999), although sometimes a different terminology is applied. One category comprises rational (Kotler & Armstrong, 1994) informational, thinking (R. P. Bagozzi et al., 1999) or cognitive (Batra & Ray, 1986) appeals (this paper will refer to this type of appeal

using the term “rational”). These rational appeals typically contain factual information such as product attributes or describe product benefits such as a product’s quality, economy, value or performance and have utilitarian consequences (R. P. Bagozzi et al., 1999; Kotler & Armstrong, 1994). The effectiveness of rational appeals is based on information processing models of decision making where consumers are believed to make logical and rational decisions (Albers-Miller & Stafford, 1999). In contrast, the other emotional or affective category uses different terms (e.g. transformational (Puto, 1987), emotional (Albers-Miller & Stafford, 1999) or feeling ads (R. P. Bagozzi et al., 1999)). Those appeals focus on emotions consumers will experience through the use or ownership of a product or service (R. P. Bagozzi et al., 1999). An overview of how emotions are used in marketing is found in Richins (1997). The effectiveness of those advertising appeals is grounded in the more emotional and experiential consumer reactions.

Extensive research has examined and debated the effectiveness of rational versus emotional appeals (Holmes & Crocker, 1987; Luce, Bettman, & Payne, 1999; Tellis, 2004). Over time, the effectiveness of appeals in persuasive communication has been found to be more complex than a simple differentiation between rational and emotional appeals. Most research about communication effectiveness of emotions vs. rational thoughts finds interactions effects. However, there is conclusive evidence that the appeal should “match” or be congruent the product *type* (Johar & Sirgy, 1991; Shavitt, 1990, 1992). That is, a more emotional (value-expressive) appeal should be used for value-expressive products and a more rational (utilitarian) appeal should be used for utilitarian products.

Although the literature establishes a framework and some guidelines for the general marketing of sustainable products, major research gaps remain to empirically explain which aspects of a marketing brochure are effective to influence consumer choice. This gap applies broadly in tourism and across different tourism markets. Furthermore, while it may be clearly established that emotional and rational or cognitive communications influence consumer choice differently, it has not yet been tested how this relates specifically to sustainable tourism products across different consumer markets. Thus, the present study is an innovative contribution, because it addresses these broad research gaps, and specifically, it examines how tourism markets respond to specific communication elements presented in a common brochure. The study also has an interdisciplinary approach (communication, psychology, linguistics, tourism and sustainability) and its attempt to identify which visual or textual rational and emotional communication element is effective to influence consumer choice is a novel contribution. Therefore, the main research question of this study is to determine what the effective ways are to communicate a sustainable tourism product with respect to altering the perceived emotionality and rationality of elements in a travel brochure. In this context the specific objectives of the study are to answer the following questions empirically:

- a) Does emotional communication (text and visualisation) increase purchase intentions for sustainable products?
- b) Does rational communication increase purchase intentions?
- c) Does a graphical illustration of sustainability attribute which tries to help explaining the sustainability of the product increase purchase intention?

3. Empirical method

This study consists of two empirical phases: the pre-test experiment which is explained in section 3.1 and the choice experiment which is described in section 0.

3.1. Pre-test experiment

A pre-test experiment was conducted to determine the perceived level of emotionality and rationality of text and image communications by tourists. The online survey took place in four countries: Switzerland (n= 757), Germany (n= 751), UK (n= 756), and in the USA (n= 766). Only people who have travelled during the last year were invited. Different pictures and short text relating to the standard and sustainable characteristics of the product were shown to respondents. These pictures and texts were created by two specialists in linguistics and visual communication.

As it is well established that images are a main source for emotions in human communication (Münsterberg, 1970) and photographs can provoke emotions in the viewer (Machajdik & Hanbury, 2010; Merleau-Ponty, 1962; Schierl, 2001; Sontag, 1973) the selection of the pictures for this study was based on a large set of studies carried out by the NIMH Center for the Study of Emotion and Attention at the University of Florida in Gainesville, USA (Lang, Bradley, & Cuthbert, 2008). The International Affective Picture Set (IAPS) is a controlled set of colour photographs that has been rated by large groups of people for the feelings of pleasure and arousal and are currently used in experiments on emotion and attention worldwide (Bradley & Lang, 2007). Other insight to select pictures for this study has been taken from image theory (Schmitz, 2011; Scholz, 1991; Stoeckl, 2004).

A set of images in the category “landscapes” was selected that potentially elicit positive feelings. These images were chosen from set of over 1000 images with quantitatively tested values for ‘pleasure’ and ‘arousal’ of the IAPS report. A set of four parameters to control the anticipated effect of images on the viewers were chosen including (a) landscape topography, (b) activity (c) weather conditions and (d) image saturation properties. These parameters were chosen as they strongly influence emotional responses by viewers. For example, classically beautiful landscapes such as a white beach with pure clean water have the highest emotional value for arousal and pleasure amongst landscape images. Thus, using these four parameters, the set of images selected for the study were also rated and labelled as strongly, weakly emotional or neutral. These pictures can be viewed in Table 1.

Neutral	Weakly emotional	Strongly emotional
		

Table 1: Pictures of the experiment

Similar to images, text can also be the source to influence human emotions and these can be analysed according to various factors such as style (Battacchi, Suslow, & Renna, 1996; Schwarz-Friesel, 2007). On a semantic level it is about finding the word that exactly fits the meaning of the author while on a syntactic level readability and comprehensibility are important (Demarmels & Janoschka, 2012; Demarmels & Schaffner, 2013; Göpferich, 2008). On a certain level, text style merges with text patterns. In an experimental design about effects of language in tourism brochures, texts need to be analysed with regard to wording (including rhetoric), syntax, texts, visuals and pragmatics. Texts requesting an action such as the booking of a trip can be amplified with adequate emotions. Positive or negative emotions tend to distort the interpretation of message (Hielscher, 2003). Therefore, the actual actions cannot be controlled. In a text, the emotions of the author are always visible to a certain point. Evoking emotions by readers is often seen as writing or telling about emotions, so that the recipient also feels these. However, this is not sufficient, as one would have to be happy, angry, or sad to create such emotions in recipients. There are tough other means to arouse emotions: emotionalisation strategies (Demarmels, 2009). Emotional schemes can be divided in cross-cultural, cultural and subcultural. On the level of (verbal and visual) language there are different means like symbols, punctuation marks, key words, emotional connotations, rhetorical figures or promises of happiness and threats. Based on literature and techniques in linguistics, for the purposes of the study texts were developed for the fictive brochure. The texts were initially from a standard description of a beach holiday in Menorca, and using the methods by Demarmels (2009), each text was adapted to be less, slightly or strongly emotional. The first two text groups in the first two rows in Table 2 are texts that do not refer to the sustainability of holidays, whereas the other text groups describe an attribute of sustainable tourism.

Less emotional	Slightly emotional	Strongly emotional
The beach can be found near our hotel.		Adjacent to our hotel you will find our long, white and sandy beach.
The hotel is located near the beach. Snacks can be eaten there. The hotel offers a pool area and two restaurants.	The hotel is close to the beach. It also offers a quiet pool area, a bar and two convenient restaurants.	Go for a walk along the beach, have a snack in a popular bar or cozy restaurant and relax at our pool.
Regional products are served.	We serve regional products.	We serve you only the highest quality regional products.
The entire stay is CO2-neutral, for example, thanks to energy and hot water from our own solar panels.	We offer you a CO2-neutral stay, for example thanks to energy and hot water from our own solar panels.	Would you like to enjoy your holiday without a guilty conscience? We offer you a CO2-neutral stay thanks to energy and hot water from our own solar panels.
Room cleaning with ecological products, which can be naturally decomposed in a short time.	Room cleaning with ecological products.	Room cleaning with especially ecological and environmentally-friendly products.
The handcrafted souvenirs in the hotel shop are produced exclusively by local artisans.	The souvenir shop sells hand-crafts sourced solely from local artisans.	Support the local artisans by buying handmade products in our souvenir shop.

Table 2: Text elements of the pre-test experiment

One half of the textual and visual element groups were shown to one half of the respondents, the other half to the other respondents, because the length of the online questionnaire was restricted and the cognitive load for the participants had to be reduced after the pre-test.

During the experiment, the communication was rated by each respondent according to emotionality and rationality using a Likert scale from 1 to 7. Emotionality was tested using a set of items based on a literature review (R. P. Bagozzi et al., 1999; Mehrabian, 1974; Rosselli, 1995). Therefore, participants rated to what extent they perceived the elements as “inspiring” and “appealing” Respondents also rated the texts according to extent they positive or negative feelings evoked. Rationality was tested using items also obtained from the literature, which enabled respondents to rate the texts as “informative” and “objective”² based on Holbrook (1987).

² The question about “objectivity” was not asked for the pictures.

3.2. Choice experiment

To test communication preferences by potential customers, a choice experiment was conceived with different ways of communicating the features of a fictive holiday product. This product represented a typical mass tourism holiday and did not in any way address the luxury segment. It was located in Menorca for European respondents and in Cancun, Mexico, for the respondents of the USA as these are typical destinations for beach holidays.

The experiment was conducted online because web-based surveys have several advantages such immediacy, time saving, and higher response rate” (Caussade, Dios Ortuzar, Rizzi, & Hensher, 2005). The experiment took place in the same countries as the pre-test experiment (Germany (n= 754), Switzerland (n= 751), UK (n= 751), and USA (n= 750)). Again, only people who have travelled during the last year were invited.

The experiment did not vary the characteristics of the product, but different versions of the communication of the same product and its sustainability attributes were shown to respondents. Respondents then had to choose the preferred version from six sets, with two different versions in each set. The different sets varied according to the:

- level of emotionality addressed
- level of rationality of information
- visualisation used by including a technical graph.

Since we vary the level of emotionality and the level of rationality respectively, we follow the integrative approach regarding the differentiation between rational and emotional levels. This approach, in contrast to the dichotomous approach, assumes that appeals simultaneously induce rational and emotional responses (Stafford & Day, 1995; Zinkhan, Johnson, & Zinkhan, 1992).

The pre-test experiment was used to choose the best suited attributes for the choice experiment, because the perceived emotionality and rationality of the elements is known. The attributes will be presented in section 4 based on the results of the pre-test experiment.

The combination of the pre-test and the choice experiment allowed analysing which level of emotionality and which level of rationality in the communication of sustainability as perceived by the customer is more likely to lead to increased purchase intention and is therefore best suited to successfully sell sustainable tourism products.

4. Results

Results of the pre-test experiment and its use in the design of the choice experiment

The following summarises aggregated indices measuring emotionality and rationality from the pre-test experiment relevant for the choice experiment’s empirical design a. The aggregated indices were built by aggregating some of the tested items presented in section 3.1 as shown in Table 3.

	Pictures	Images
Emotionality	The picture is inspiring. The picture is appealing.	The text is inspiring. The text is appealing.
Rationality	The picture is informative.	The text is informative. The text is objective.

Table 3: Items for the aggregated indices

Table 4 shows the resulting aggregated indices for emotionality and rationality for the pictures in the pre-test experiment over all countries. The results confirm the classification that was made ex ante with respect to emotionality, and there are only small differences in the perceived rationality of the pictures. Therefore these pictures were used in the choice experiment to test the influence of different levels of emotionality caused by pictures. These were not considered for different rationality levels.

All countries	Neutral picture	Weakly emotional picture	Strongly emotional picture
Emotionality	5.2	5.4	5.9
Rationality	4.1	4.2	3.9
Switzerland			
Emotionality	4.98	5.37	5.92
Rationality	4.28	4.46	4.12
Germany			
Emotionality	5.24	5.37	5.87
Rationality	4.33	4.44	3.98
UK			
Emotionality	5.27	5.33	5.76
Rationality	3.95	3.96	3.54
USA			
Emotionality	5.43	5.50	5.90
Rationality	4.00	4.14	3.87

Table 4: pre-test experiment results: Picture emotionality and rationality

Table 5 presents the aggregated indices values measuring emotionality for the text elements used in the choice experiment. The last column in Table 5 shows if the values are significant between the countries. There are some clear differences when describing the same feature of a holiday in different ways e.g. the use of regional product can be communicated in a more emotional way (e.g. t_10_e with a value of 4.6 and t_11_e with 3.6 in the USA).

Germany			Switzer-land	UK	USA	Signifi-cance
Varia-ble name	Text shown in the experiment	Index for emotion-ality	Index for emotion-ality	Index for emotion-ality	Index for emotion-ality	P value of ANOVA
t_15	Go for a walk along the beach, have a snack in a popular bar or cozy restaurant and relax at our pool.	4.7	4.8	5.0	5.2	0.000
t_10	We serve you only the highest quality regional products.	4.4	4.6	4.6	4.6	0.089
t_02	Room cleaning with ecological products, which can be naturally decomposed in a short time.	4.3	4.5	4.2	4.4	0.015
t_03	Room cleaning with especially ecological and environmentally-friendly products.	4.1	4.4	4.3	4.5	0.010
t_16	The hotel is located near the beach. Snacks can be eaten there. The hotel offers a pool area and two restaurants	4.1	4.3	4.6	4.5	0.000
t_06	The hand-crafted souvenirs in the hotel shop are produced exclusively by local artisans.	4.0	4.4	4.5	4.8	0.000
t_11	Regional products are served.	3.7	3.9	3.6	3.6	0.024
t_04	Support the local artisans by buying handmade products in our souvenir shop.	3.7	4.0	4.3	4.6	0.000

Table 5: Results of the pre-test experiment: Aggregated index for emotionality of the text elements

There are different successful strategies to increase the emotionality of a text, as can be seen in Table 5. By comparing t_15 and t_16 we can conclude that narratives are a good instrument to increase emotionality. The same holds for texts that directly address consumers (t_10 and t_11 as well as t_15 and t_16), for actively formulated texts (t_10 and t_11) and for adjectives that include highly valued words such as “highest” in t_10.

Table 6 presents aggregated indices values for rationality for the text elements used in the choice experiment. The last column shows if the values are significant between the countries.

Germany			Switzer- land	UK	USA	Signifi- cance
Varia- ble name	Text shown in the experiment	Index for rationali- ty	Index for rationali- ty	Index for rationali- ty	Index for rationali- ty	P value of ANOVA
t_02	Room cleaning with ecological products, which can be naturally decomposed in a short time.	4.7	5.0	4.8	4.9	0.056
t_16	The hotel is located near the beach. Snacks can be eaten there. The hotel offers a pool area and two restaurants	4.7	4.8	5.0	5.0	0.000
t_15	Go for a walk along the beach, have a snack in a popular bar or cozy restaurant and relax at our pool.	4.5	4.6	4.9	5.0	0.000
t_03	Room cleaning with especially ecological and environmentally-friendly products.	4.4	4.6	4.6	4.8	0.002
t_10	We serve you only the highest quality regional products.	4.4	4.6	4.6	4.5	0.233
t_06	The hand-crafted souvenirs in the hotel shop are produced exclusively by local artisans.	4.4	4.9	4.8	5.2	0.000
t_11	Regional products are served.	4.0	4.2	3.9	4.0	0.038
t_04	Support the local artisans by buying handmade products in our souvenir shop	4.0	4.5	4.5	4.8	0.000

Table 6: Results of the pre-test experiment: Aggregated index for rationality of the text elements

The attributes and their levels used in the choice experiment were chosen based on the pre-test experiment's results. The goal was to consider a pair of text elements which presented the same attribute but where the distance of the measured values between the two elements is maximal in one measured dimension (e.g. emotionality) and minimal in the other dimension (e.g. rationality). Therefore, the two text elements about regional products (t_10 and t_11) were used to test the influence of the emotionality of a text relating to product sustainability effects on consumer choice. These two elements were chosen, because the differences in emotionality are the largest (between 0.6 and 1, depending on the country). To assess the emotionality of standard product features t_15 and t_16 were taken because the emotionality varied between 0.4 and 0.7 whereas rationality does not differ much. In order to measure the effect of different levels of rationality in the textual sustainability communication t_03 and t_02 were chosen for German-speaking countries and t_04 and t_06 for English-speaking countries. Two different appeals had to be selected since the variation does not have the same pattern in all countries with respect to rationality. Additionally to pictures and text elements, a graph was included in order to test if respondents preferred this kind of communication about sustainability facts. Therefore, the following attributes and levels as shown in Table 7 were used in the choice experiment.



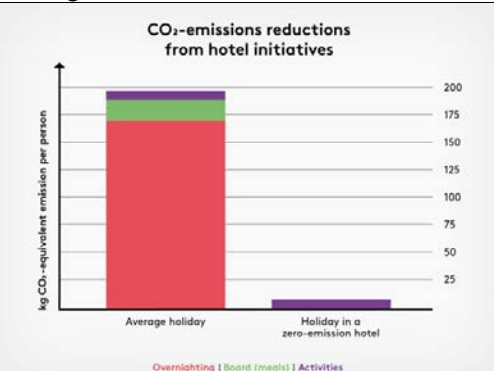
Variable name	Level	Description
Picture	Less emotional picture	
	Emotional picture	
Text standard features	Less emotional text	The hotel is located near the beach. Snacks can be eaten there. The hotel offers a pool area and two restaurants.
	Emotional text	Go for a walk along the beach, have a snack in a popular bar or cosy restaurant and relax at our pool.
Text sustainability emotional	Less emotional text	Regional products are served.
	Emotional text	We serve you only the highest quality regional products.
Text sustainability rational	Less rational text	Support the local artisans by buying hand-made products in our souvenir shop.
	Rational text	The handcrafted souvenirs in the hotel shop are produced exclusively by local artisans.
Graph	No graph	The hotel reduces the CO ₂ emissions of your stay in various ways. Thanks to this, your stay contributes 57 kg CO ₂ instead of 248 kg CO ₂ .
	Graph included	 <p>CO₂-emissions reductions from hotel initiatives</p> <p>kg CO₂-equivalent emission per person</p> <p>Average holiday Holiday in a zero-emission hotel</p> <p>Overnighting Board (meals) Activities</p>

Table 7: Attributes of the choice experiment

Choice experiment results are presented in the following paragraphs below.

Preferences

The preference shares were calculated by employing a counting analysis with the *Sawtooth* software. The preference share shows how often a single level of an attribute was chosen if this specific level of the attribute was included in the choice set. The following Table 8 shows the preferences for the emotionality of the picture.

Country	Switzerland	Germany	UK	USA
Total Respondents	751	754	751	750
Less emotional picture	37.7%	37.6%	39.1%	36.8%
Emotional Picture	49.8%	48.8%	48.4%	49.4%
χ^2	75.59	65.46	44.32	82.58
Degrees of freedom	1	1	1	1
Significance	p < 0.01	p < 0.01	p < 0.01	p < 0.01

Table 8: Preferences for the emotionality of the picture

Emotional pictures having a preference between 48.4% and 49.8% are much stronger preferred compared to the choice of a less emotional picture (between 36.8% to 39.1%). The difference is significant in all countries.

Country	Switzerland	Germany	UK	USA
Total Respondents	751	754	751	750
No Graph	48.2%	48.1%	51.1%	47.8%
Graph included	39.3%	38.2%	36.5%	38.4%
χ^2	40.32	51.63	109.92	46.51
Degrees of freedom	1	1	1	1
Significance	p < 0.01	p < 0.01	p < 0.01	p < 0.01

Table 9: Preferences for a graph about the sustainability of the product

The respondents show a strong preference for not including a graph that illustrated net tourism product emissions (Table 9). The preferences for not including a graph range from 47.8% in the USA to 51.1% in the UK.

Country	Switzerland	Germany	UK	USA
Total Respondents	751	754	751	750
Less emotional text sustainability	40.2%	39.9%	39.0%	41.3%
Emotional text sustainability	47.4%	46.4%	48.4%	48.3%
χ^2	27.14	22.23	45.02	56.17
Degrees of freedom	1	1	1	1
Significance	p < 0.01	p < 0.01	p < 0.01	p < 0.01

Table 10: Preferences for the emotionality of the text parts addressing sustainability issues

Table 10 shows that respondents have a significant preference for more emotional texts about the sustainability of the product in a brochure with preference ranging from 46.4% to 48.4% in all countries.

Country	Switzerland	Germany	UK	USA
Total Respondents	751	754	751	750
Less rational text sustainability	42.2%	41.3%	42.5%	41.7%
Rational text sustainability	45.3%	45.0%	45.0%	44.4%
χ^2	4.89	7.33	3.36	3.93
Degrees of freedom	1	1	1	1
Significance	p < 0.05	p < 0.01	not sig	p < 0.05

Table 11: Preferences for the rationality of the text parts addressing sustainability issues

The preferences regarding the desired level of text element rationality about product sustainability show mixed results (Table 11). There is a small significant preference for more rational texts in Switzerland, Germany and the USA.

Country	Switzerland	Germany	UK	USA
Total Respondents	751	754	751	750
Less emotional text	43.1%	43.2%	43.2%	41.3%
Emotional text	44.4%	43.1%	44.3%	44.8%
χ^2	0.94	0.01	0.58	6.27
Degrees of freedom	1	1	1	1
Significance	not sig	not sig	not sig	p < 0.05

Table 12: Preferences for the emotionality of the text parts addressing standard product elements

Table 12 shows almost no preferences are found changing the emotionless of standard product communication of elements such as the beach, restaurants in the hotel, etc. Respondents are indifferent between the two communication ways in Switzerland, Germany and the UK. Only in the United States is a small significant preference for more emotional communication of the standard elements in the travel brochure.

Country	Switzerland	Germany	UK	USA
Total Respondents	751	754	751	750
None chosen	12.5%	13.7%	12.5%	13.9%

Table 13: Preferences for "None" option

Of all choices, 12.5% to 13.9% of all respondent surveyed chose the answer "I would not choose any of these products" (see Table 13). These values are typical, as 5% to 15% of respondents in choice experiments commonly opt for the "none" option (Johnson & Orme, 2003)

Part Worth and Importance

A hierarchical Bayes model was used and estimated with the CBC/HB-tool from *Sawtooth* to derive part worth utilities on an individual level. The model is given by the following equation that shows the estimated probability of individual h choosing concept j (Gensler, 2003 ; Sawtooth, 2010).

$$\hat{p}_{h,i} = \frac{\exp(\hat{\beta}_h' x_i)}{\sum_{i \in C_a} \exp(\hat{\beta}_h' x_i)} \quad \forall h \in H, i \in C_a \text{ and } C_a \subseteq I$$

$$\hat{\beta}_h \sim \text{MVN}(\mu, \Gamma)$$

$\hat{p}_{h,i}$ = estimated probability of individual h choosing concept j

$\hat{\beta}_h$ = estimated vector of part worths for individual h

C_a = index set of stimuli in choice set a

x_i = vector of values describing the alternative i in a choice task

μ = vector of means of the distribution of individuals' part worths

Γ = matrix of variances and covariances of the distribution of part worths across individuals

The average part worth utilities, the standard errors and the t-ratios of the above mentioned logit estimation using hierarchical Bayes iteration are shown in Table 14 for the USA only, since the values were similar for all countries.

Attribute	Effect	Std Err	t Ratio
Picture			
Less emotional picture	- 49.9	55.7	- 6.7
Emotional picture	49.9	55.7	6.7
Text standard features			
Less emotional text	- 9.5	46.4	- 1.4
Emotional text	9.5	46.4	1.4
Text sustainability emotional			
Less emotional text	- 35.4	35.5	- 5.9
Emotional text	35.4	35.5	5.9
Text sustainability rational			
Less rational text	- 5.4	26.8	- 1.1
Rational text	5.4	26.8	1.1
Graph			
No graph	34.5	95.9	3.5
Graph included	- 34.5	95.9	- 3.5
None	- 629.6	827.0	- 21.9

Table 14: Results from the CBC/HB model – Part worths

The relative importance of each attribute in the brochure is shown in Table 15. The importance is a measure for the relative importance of an attribute on preference changes compared to the other attributes (Hair, Anderson, Tatham, & Black, 1995). It is derived by evaluating the level of influence of each attribute on total utility. This can be calculated by using the difference between the highest and lowest utility of the levels of each attribute, i.e. the range in the attribute's utility values. In order to derive the relative importance, the range of a specific attribute

has to be divided by the sum of all ranges of all attributes. The calculation of relative importance values on individual levels was completed and averaged using a tool from Sawtooth (Orme, 2010).

The results in Table 15 indicate consistent results for almost all countries proving that the graph has the highest importance to influence respondent choice with values between 35.2 and 43.8. The second most important influencing attribute is the picture in the brochure, followed by text elements about sustainability where the emotionality was altered (third), then text elements about standard features (fourth) and text elements about sustainability where the rationality was altered last (fifth). This order applies to all respondents except in Germany, where the standard text elements are ranked third and text elements about sustainability where the emotionality of the communication is altered fourth.

Country	Switzerland	Germany	UK	USA
Total Respondents	751	754	751	750
Graph	38.8	40.3	43.8	35.2
Picture	23.2	20.1	18.7	24.7
Text sustainability emotional	15.7	13.6	15.9	16.8
Standard text emotional	12.5	14.4	13.1	15.2
Text sustainability rational	9.7	11.6	8.6	8.1

Table 15: Importance of the attributes

5. Discussion and conclusions

Using an empirical and interdisciplinary approach, this explorative study successfully showed the importance of emotionality in communication of tourism products that include sustainability attributes. As personal sustainability benefits of a tourism product are not always obvious or visible for customers (McDonald, 2006), especially before experiencing the product per se, it is essential to communicate these features related to sustainability in a way that reaches consumers at the emotional level. This is especially important, because most people have never booked a sustainable tourism product (Wehrli, Egli, Lutzenberger, Pfister, & Stettler, 2012). Applying a choice experiment, the study collected useful insights into the Swiss, Germany, UK and US tourism markets by obtaining 3006 completed responses.

To derive the best or most preferred communication set for a sustainable tourism brochure aimed at the average tourists, all results were consolidated about importance and preferences. Accordingly, the following order of importance of communication elements results from the choice experiment:

1. No Graph
2. Emotional picture
3. Emotional text elements about product sustainability
4. Emotional text elements about standard product features (but indifferent preferences about the level of emotionality)
5. Rational text elements about the sustainability of the product

This order holds for all tourism markets except Germany. The preferred level of each attribute, e.g. no graph, follows from the preferences as reported in Table 8 to Table 12. It is not a surprise that visual elements are more important in a brochure, since images are key elements for attention arousal in advertisements on posters and in newspapers (Schierl, 2001). However, it is

a notable finding that people do not prefer technical graphs illustrating product sustainability relating to emissions. This may be explained by a set of interrelating factors. It may be that people don't like business-like graphs in a travel brochure, as this is not congruent with enjoying holidays, even if the booking is just the first phase of the travel process. Many people booking a packaged beach holiday may also be not familiar with technical graphs, or with emission data and so the inclusion of such material may be perceived as irrelevant, invalid or simply superfluous information. Furthermore, the average consumer may not be trained, or used to reading or interpreting graphs at all, or in specific context of a beach holiday in a travel brochure, because these are commonly filled with short texts instead. Also, it is presently an uncommon practice in the travel and tourism advertising world.

It is also noteworthy that the most important element of the three different text elements was the element where the emotionality of the sustainability communication is altered. Assuming that sustainable tourism products are value expressive, these findings are in line with Johar and Sirgy (1991) and Shavitt (1992), proposing that this type of product should be promoted using emotional appeals. It is even more interesting that the respondents preferred to have an emotional communication about sustainability while they were indifferent about the emotionality of the standard product feature description (such as the beach, sea, restaurants, etc.) in three of the four countries investigated. One other possible explanation might be that people already start to dream when they read a travel brochure, and so they might not care about the emotionality of the description of the beach, sea, restaurants, and other standard features of a beach holiday. However, most people normally do not consider this as an important characteristic that influences their booking decision (Wehrli et al., 2011). This suggests that consumers might need to be convinced to buy sustainable tourism products, whereas they do not need to be convinced to book a beach holiday (Belz & Peattie, 2012; Kotler, Bowen, & Makens, 2010).

Based on the findings of the pre-test experiment where the perceived emotionality and rationality were tested companies can increase the emotionality of their sustainable tourism marketing texts by including:

- Narratives
- Text that directly addresses consumers
- Actively formulated texts
- Adjectives that include highly valued words for example "perfect", "superior" etc.

Although this study successfully explored communication preferences in four travel markets in relation to the marketing of a sustainable beach holiday, it also has a number of limitations. The selected method leads to some limitations, since online surveys are prone to self-selection biases, not necessarily in terms of socio demographics but in terms of travel behavior (Dolnicar, Laesser, & Matus, 2009). The pre-test experiment suffers from a very complex questionnaire. Maybe it would have been better to ask these questions in personal interviews. An online approach was taken, because of its lower costs due to our limited budget. The text elements for the pre-test experiment were written in German. Therefore, the translation process could have caused some of the differences observed in the perceived emotionality and rationality in the English-speaking countries, although the translation was made and checked by two bilingual linguists independently. The fact that some differing results between Europe (incl. UK) and USA are found might indicate that the translation did not bias the results heavily. Finally, the results of the choice experiment may be skewed because the included graph may have been too prominent in the choice experiment. This might have led to an overestimation of the importance of the graph. The picture and the graph had the same size in order to ensure the

readability of the graph in the experiment. Normally, pictures would cover a higher part of the surface of a page in a travel brochure.

The results of the study also highlight some further research areas that could validate the findings of this study. The authors intend to further analyse the dataset in particular to explain country specific differences and to explain customer segment specific results. It would also be interesting to repeat the study in other countries. A future study could test a real travel brochure pages in the market rather than a controlled designed version as was done in this study. Furthermore it could be interesting to look at the reasons why the respondents did not prefer a graph and to investigate what kind of graphs they would have preferred instead of the shown business-like graph.

6. References

- Albers-Miller, Nancy D., & Stafford, Marla Royne. (1999). An international analysis of emotional and rational appeals in services vs goods advertising. *Journal of Consumer Marketing*, 16(1), 42-57.
- Bagozzi, R. (1997). Goal-Directed Behaviors in Marketing: The Role of Emotion, Volition, and Motivation. *Psychology and Marketing*, 14(6), 539-544.
- Bagozzi, R. P., Gopinath, M., & Nyer, P. U. (1999). The Role of Emotions in Marketing. *Journal of the Academy of Marketing Science*, 27(2), 184-206.
- Batra, Rajeev, & Ray, Michael L. (1986). Affective Responses mediating acceptance of advertising. *Journal of Consumer Research*, 13, 234-249.
- Battacchi, M. W., Suslow, T., & Renna, M. . (1996). *Emotion und Sprache. Zur Definition der Emotion und ihren Beziehungen zu kognitiven Prozessen, dem Gedächtnis und der Sprache*. Frankfurt am Main.
- Belz, Frank-Martin , & Peattie, K. (2012). *Sustainability Marketing. A global perspective*. Chichester: Wiley & Sons.
- Bradley, M. M., & Lang, P. J. (2007). The International Affective Picture System (IAPS) in the study of emotion and attention. In C. J. A. & A. J. J. B. (Eds.), *Handbook of Emotion Elicitation and Assessment* (pp. 29-46). Oxford
- Caussade, S., Dios Ortuzar, J. D., Rizzi, L. I., & Hensher, D. A. (2005). Assessing the influence of design dimensions on stated choice experiment estimates. *Transportation Research*, 39(7), 621-640.
- Cherian, Jacob, & Jolly, Jacob. (2012). Green marketing: A study of consumers' attitude towards environment friendly products. *Asian Social Science*, 8(12).
- Demarmels, S. (2009). *Ja. Nein. Schweiz. Schweizer Abstimmungsplakate im 20. Jahrhundert*. Konstanz: UVK.
- Demarmels, S., & Janoschka, A. (2012). Ökostrom oder Naturpower? Verständlichkeit als Zeichen für Qualität in der Marketingkommunikation. In H. H. K. Lobinger (Ed.), *Qualitäten der Werbung – Qualitäten der Werbeforschung* (pp. 245–264). Köln: Halem.
- Demarmels, S., & Schaffner, D. (2013). Die Wirkung von Verständlichkeit in der Marketingkommunikation für erklärungsbedürftige Güter. In T. S. J. Tropp (Ed.), *Wert und Werte der Marketingkommunikation* (pp. 73-91). Köln: Halem.
- Dolnicar, S., Laesser, C., & Matus, K. . (2009). Online versus Paper, Format Effects in Tourism Surveys. *Journal of Travel Research*, 47(3), 295-316.

- Gensler, S. (2003). *Heterogenität in der Präferenzanalyse: Ein Vergleich von hierarchischen Bayes-Modellen und Finite-Mixture-Modellen*. Wiesbaden, Germany: Deutscher Universitäts-Verlag.
- Göpferich, Susanne. (2008). *Textproduktion im Zeitalter der Globalisierung. Entwicklung einer Didaktik des Wissenstransfers*. 3. Aufl. . (3. Aufl. ed.). Tübingen, Stauffenburg.
- Hair, Joseph F., Anderson, Rolph E., Tatham, Ronald L. , & Black, William C. (1995). *Multivariate Data Analysis with Readings* (Fourth Edition. ed.). Englewood Cliffs, New Jersey: Prentice Hall.
- Han, Heesup, Hsu, Li-Tzang Jane, & Sheu, Chwen. (2010). Application of the Theory of Planned Behaviour to green hotel choice: testing the effect of environmental friendly activities. *Tourism Management*, 31, 325-334.
- Hielscher, M. (2003). Sprachrezeption und emotionale Bewertung. In G. Rickheit, T. HErrmann & W. Deutsch (Eds.), *Psycholinguistik. Ein internationales Handbuch* (pp. 677–707). Berlin.
- Holbrook, Morris B. and Rajeev Batra (1987). Assessing the Role of Emotions as Mediators of Consumer Responses to Advertising. *Journal of Consumer Research*, 14(3), 404 - 420.
- Holmes, John H., & Crocker, Kenneth E. . (1987). Predispositions and the Comparative Effectiveness of Rational, Emotional and Discrepant Appeals for Both High Involvement and Low Involvement Products. *Academy of Marketing Science*, 15(2), 27-54.
- Jackson, Tim. (2004). *Motivating sustainable consumption. A review on evidence on consumer behaviour and behaviour change. A report to the Sustainable Development Research Network. Centre for Environmental Strategy*. Guildford: University of Surrey.
- Johar, J. S., & Sirgy, M. J. (1991). Value-expressive versus utilitarian advertising appeals. . *Journal of Advertising*, , 20(3), 23-33.
- Johnson, R., & Orme, M. . (2003). Getting the Most from CBC Sawtooth Software RESEARCH PAPER SERIES. Sequim.
- Kim, Yong Joong. (2012). *The role of emotion in consumers' intentions to select eco-friendly restaurants: Broadening and deepening the theory of planned behavior*. (Doctor of Philosophy), Oklahoma State University, Oklahoma.
- Kotler, P., & Armstrong, G. (1994). *Principles of Marketing* Englewood Cliffs N. J.: Prentice Hall.
- Kotler, P., Bowen, John T., & Makens, J. C. (2010). *Marketing for Hospitality and Tourism* (Fifth Edition ed.). New Jersey: Pearson.
- Lang, P.J., Bradley, M.M., & Cuthbert, B.N. (2008). International Affective Picture System (IAPS): Affective Ratings of Pictures and Instruction Manual. Technical Report A-8. . Gainesville
- Lee, Jin-Soo, Hsu, Li-Tzang Jane, Han, Heesup, & Kim, Yunhi. (2010). Understanding how consumers view green hotels: how a hotel's image can influence behavioural intentions. *Journal of Sustainable Tourism*, 18(7), 901-914.
- Luce, Mary Frances, Bettman, James R., & Payne, John W. (1999). Emotional Tradeoff Difficulty and Choice. *Journal of Marketing Research*, 36(2), 143-159.
- Machajdik, Jana, & Hanbury, Allan. (2010). *Affective Image Classification using Features Inspired by Psychology and Art Theory*. Paper presented at the MM '10 Proceedings of the International Conference on Multimedia, New York.
- McDonald, S., Oates, CJ. (2006). Sustainability: Consumer perceptios and marketing strategies. *Business Strategy and the Environment*, 13(3), 157 - 170.
- Mehrabian, A. and J.A. Russell. (1974). The basic emotional impact of environments. *Perceptual and Motor Skills*, 38, 283-301.
- Merleau-Ponty, Maurice. (1962). *Phenomenology of Perception*. London.

- Millar, M., & Baloglu, S. (2011). Hotel guests' preferences for green guest room attributes. *Cornell University Quarterly*, 53(3), 302-311.
- Münsterberg, Hugo. (1970). *The Film. A Psychological Study*. New York.
- Orme, Bryan. (2010). *Getting Started with Conjoint Analysis: Strategies for Product Design and Pricing Research* (Second edition ed.). Madison (USA): Research Publishers LLC.
- Puto, Christopher P. (1987). The Framing of Buying Decisions *Journal of Consumer Research* (Vol. 14, pp. 301): Journal of Consumer Research, Inc.
- Richins, Marsha-L. (1997). Measuring Emotions in the Consumption Experience. *Journal of Consumer Research*, 24(2), 127-146.
- Rosselli, Francine, John J. Skelly, and Diane M. Mackie (1995). Processing Rational and Emotional Messages: The Cognitive and Affective Mediation of Persuasion. *Journal of Experimental Social Psychology*, 31(2), 163-190
- Roth, T. (2010). *Green Traveller Survey*. . San Francisco: CMI Green Community Marketing.
- Sawtooth. (2010). The CBC/HB System for Hierarchical Bayes Estimation (Version 5.0) Technical Paper. Sequim, Washington.
- Schierl, Thomas. (2001). *Text und Bild in der Werbung: Bedingungen, Wirkungen und Anwendungen bei Anzeigen und Plakaten*. Köln.
- Schmitz, Ulrich. (2011). Sehflächenforschung. In H. Diekmannshenke, M. Klemm & H. Stöckl (Eds.), *Bildlinguistik. Theorien–Methoden–Fallbeispiele*. Berlin
- Scholz, Oliver R. (1991). *Bild, Darstellung, Zeichen: Philosophische Theorien bildhafter Darstellung*. Freiburg/München
- Schwarz-Friesel, M. (2007). *Sprache und Emotion*. Tübingen.
- Shavitt, Sharon. (1990). The role of attitude objects in attitude functions. *Journal of Experimental Social Psychology*, 26(2), 124-148.
- Shavitt, Sharon. (1992). Evidence for Predicting the Effectiveness of Value-Expressive versus Utilitarian Appeals: A Reply to Johar and Sirgy. *Journal of Advertising*, 21(2), 47-51.
- Sontag, Susan. (1973). *On Photography*. New York.
- Stafford, M.R., & Day, E. . (1995). Retail services advertising: the effects of appeal, medium, and service. *Journal of Advertising*, 26(1), 57-71.
- Stoeckl, Hartmut. (2004). *Die Sprache im Bild – Das Bild in der Sprache. Zur Verknüpfung von Sprache und Bild im massenmedialen Text. Konzepte, Theorien, Analysemethoden*. Berlin, New York.
- Tellis, Gerard J. (2004). *Effective Advertising: Understanding When, How, and Why Advertising Works*. Thousand Oaks: Sage.
- UNWTO. (2012). Compendium of world tourism statistics (2012 ed.). Madrid: United Nations World Tourism Organisation
- UNWTO. (2013). Sustainable Tourism Development. Definition. Retrieved 6 June 2013, from <http://sdt.unwto.org/en/content/about-us-5>
- Walters, Gabrielle, Sparks, Beverley, & Herington, Carmel. (2012). The impact of consumption vision and emotion on the tourism consumer's decision behavior. *Journal of Hospitality & Tourism Research*, 36, 366-389.
- Wehrli, Roger, Egli, H., Lutzenberger, Martin, Pfister, D., Schwarz, J., & Stettler, Jürg. (2011). Is there a demand for sustainable tourism? Study for the World Tourism Forum Lucerne 2011. Lucerne: ITW Working Paper.
- Wehrli, Roger, Egli, Hannes, Lutzenberger, Martin, Pfister, Dieter, & Stettler, Juerg. (2012). Tourists' understanding of sustainable tourism: An analysis in eight countries *GSTF Journal on Business Review*, 2(2), 219 – 224.

- Young, William, Hwang, Kumju, McDonald, Seonaidh, & Oates, Caroline J. (2010). Sustainable consumption: green consumer behaviour when purchasing products. *Sustainable Development*, 18(1), 20-31.
- Zinkhan, G.M., Johnson, M., & Zinkhan, F.C. (1992). Differences between product and service television commercials. *Journal of Services Marketing*, 6(3), 59-66.

7. Tables (with caption)

8. Figures (with caption)