

European Advertising Academy



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ADVERTISING  
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Martin Eisend / Tobias Langner  
Shintaro Okazaki (Eds.)

# **Advances in Advertising Research (Vol. III)**

Current Insights and Future Trends



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**RESEARCH**

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# European Advertising Academy



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The objective of the European Advertising Academy (EAA) is to provide a professional association to academics and practitioners interested in advertising and its applications that will promote, disseminate and stimulate high quality research in the field.

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Martin Eisend • Tobias Langner  
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*Editors*

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# Preface

We are pleased to present *Advances in Advertising Research Vol. III – Current Insights and Future Trends*, published by the European Advertising Academy (EAA). This volume consists of revised and extended versions of papers presented at the 10<sup>th</sup> ICORIA (International Conference on Research in Advertising) held in Berlin, Germany, in June 2011.

Advertising is faced with growing and multiple challenges. New media, fragmented target groups, saturated markets and advertising clutter make it increasingly difficult to reach the customer. High quality advertising research is needed more than ever. Scholars from around the globe have contributed to this book. Their papers provide current insights and examine future trends in advertising, branding and communication with the goal to address urgent problems in advertising management and advance systematic research in these fields.

The book has seven sections. Part I addresses issues related to advertising content, advertising appeals and execution; Part II explores topics of ever-growing importance in advertising research, corporate social responsibility and social issues; Part III focusses on social media, online and mobile advertising; Part IV looks into product placement; Part V explores advertising issues related to gender and children; Part VI addresses media- and agency-related topics and, finally, Part VII examines the relationship between consumers, companies and brands.

This book would never have been possible without the willingness of the contributors who participated in the 10<sup>th</sup> ICORIA and agreed to re-work and extend their conference papers. We thank all the authors for making this book possible. We especially want to express our gratitude to Silke Knoll who handled the formatting of the book and Philipp Brune who coordinated the final revisions. We are also indebted to all our colleagues for their superb job of making the Berlin conference a great success: Philipp Brune, Daniel Bruns, Ruziye Canbazoglu, Alexander Fischer, Sarah Hellebrandt, Silke Knoll, Jochen Kühn, Jessica Osebold and Susanne Schmidt.

We hope that academics, practitioners and students alike will find this volume helpful and enjoy reading.

Martin Eisend  
Tobias Langner  
Shintaro Okazaki  
Frankfurt (Oder), Wuppertal and Madrid, May 2012

# The European Advertising Academy (EAA)

The objective of the European Advertising Academy (EAA) is to provide a professional association to academics and practitioners interested in advertising and its applications that will promote, disseminate and stimulate high quality research in the field. The association particularly serves as a meeting and communication forum for its members. It offers a network for the exchange of knowledge on an international level and constitutes a framework allowing for a better dissemination of information on research and teaching.

The EAA is closely related to the yearly **International Conference on Research in Advertising (ICORIA)**. The purpose of this conference is to create a forum where people studying advertising in the academic world could exchange ideas and where they could meet with practitioners who have experience with advertising in the commercial world.

Every natural person that is professionally concerned with or interested in research or teaching in the field of advertising is, irrespective of nationality, eligible to become a full member of the organization.

The EAA was founded in 2005. The current board members are: Ralf Terlutter (president, University of Klagenfurt), Edith Smit (president elect, University of Amsterdam), Peter Neijens (past president, University of Amsterdam), Sandra Diehl (treasurer, University of Klagenfurt), Tobias Langner (information manager, Bergische University Wuppertal), Martin Eisend (European University Viadrina), Robert Heath (School of Management, Bath), Shintaro Okazaki (Universidad Autónoma de Madrid) and Patrick De Pelsmacker (University of Antwerp).

**For further information please visit our website: [www.icoria.org](http://www.icoria.org)**



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## **Part I**

### **Advertising Content, Appeals and Execution**

# Response to Probability Markers in Advertising of Hedonic and Utilitarian Services in Belgium and Croatia

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## 1 Purpose of the study

Carlsberg's "Probably..." campaigns, whose slogan has been seen in more than 100 versions of commercials and advertisements world-wide (Creative & Commercial Communications Ltd., 1998), are probably the best known example of the use of probability markers in advertising. The term probability markers refers to specific words or phrases used to signal to which degree is it likely that a given claim or argument is true. Those markers that indicate probable, rather than absolute, truth of a claim are known as hedges (e.g., "probably", "might", etc.), whereas the markers that indicate complete commitment to the truthfulness of the claim are known as pledges (e.g., "definitely", "guarantee", etc.). Hedges weaken the impact of a claim by allowing for exceptions or avoiding total commitment (Wright and Hosman, 1983) and therefore, they are considered markers of powerless language. Pledges, on the other hand, are absolute in nature and signal total confidence in the truthfulness of the claim (Berney-Reddish and Areni, 2005). They are considered markers of powerful language.

Despite the fact that probability markers are frequently used in advertising (Geis, 1982; Areni, 2002), often with very effective results, as is implied by the success and longevity of the Carlsberg campaign mentioned above, they have been effectively ignored by the great majority of marketing researchers. The few empirical studies on the topic of probability markers, concentrated mainly in a study by Harris et al. (1993), and the works of Charles Areni and his associates (e.g., Berney-Reddish and Areni, 2005, 2006), have focused only on the advertising of products, without taking into account the recognized differences between products and services (Murray and Schlacter, 1990) and the specificities of service advertising (e.g., Stafford, 1996). For these reasons, the present study attempts to fill this gap by, on one hand, contributing to the general theory and body of research on the effects of the usage of probability markers in advertising, and, on the other, focusing on this usage in the advertising of services.

Since the importance of product/service type in advertising strategy and research has been well-established (e.g., Rossiter and Percy, 1987) we apply a contingency approach to the examination of the influence of the of probability markers on advertising effectiveness by introducing the hedonic vs. utilitarian and the low vs. high involvement dimensions into the equation.

## 2 Theory background and hypotheses development

Studies so far have mostly not been able to prove the existence of any significant positive effects of the usage of probability markers in advertising on claim acceptance. Harris et al. (1993) have tested the effect of hedges (but not pledges) in advertising claims, and have found that they lead, on one hand, to increased claim acceptance, but also, on the other hand, lower purchase intentions. Berney-Reddish and Areni (2005) conducted several studies on probability markers, in which they included pledges, as well as hedges. The results of one show no statistically significant effect of the interaction of the use of probability markers and type of argument in which they are used (inductive or deductive). They do, however, find some significance in the main effects, with pledges resulting in more negative thoughts about the claim in the case of an inductive argument, and hedges in lower levels of claim acceptance in the case of a deductive argument. Much along the same lines, in a later study, Berney-Reddish and Areni (2006) found that both pledges and hedges reduce claim acceptance, and that this assertion held true more for men than for women, but their results were only marginally, if at all, significant.

One of the possible explanations for the failure of the previous studies to find significant impact of the use of probability markers in advertising can be found in Petty, Cacioppo and Schumann's (1983) Elaboration Likelihood Model, which differentiates between the central and the peripheral routes to persuasion, and posits that the message recipients use the central route in situations of high involvement, while the peripheral route is more conducive to low-involvement situations. We can, therefore, conclude that those elements of an advertisement that act as peripheral cues will only contribute to higher persuasiveness of the ad if the product or service advertised in it is a low-involvement one since the ad will in that case be only peripherally processed. In advertisements of high-involvement products or services, which consumers process via the central route, on the other hand, such cues will not play a significant role. Since language power has been empirically proven to act as a peripheral cue (Areni and Sparks, 2005), we may expect that probability markers, as signals of language power (pledges) or powerlessness (hedges) influence advertising effectiveness only in low involvement situations.

The difference between the absolute quality of a pledge, as opposed to a more conditional, probabilistic quality of a hedge, we believe, may correspond to the categorization of services into hedonic and utilitarian, frequently used in service advertising research (e.g., Stafford et al., 2002). Hedonic services, often also referred to as experiential, are characterized by high levels of people orientation, employee contact and customization (Stafford and Day, 1995). The quality of and satisfaction with a hedonic service rely on the sensations derived from the consumption of the service (Voss et al., 2003), and are highly person-specific and hard to assess objectively. Placing a claim with a hedge into a hedonic service advertisement might reduce the tendency of the consumers to counter-argue the claim (Vestergaard and Schroder, 1985) and increase the perceived honesty/credibility of the advertiser (Areni, 2002). On the other hand, using pledges, markers of absolute certainty, and thus implying universal applicability of the advertising claims, in advertisements of hedonic services might attract the consumers' attention to the inappropriateness of such claims and cause them to question the absolute and categorical conclusion of the truth of the claim. We, therefore, posit:

*H1a: Contrary to high involvement services, the use of hedges in advertisements of hedonic low-involvement services results in the highest purchase intentions compared to either ads with pledges or ads without probability markers.*

*H1b: Contrary to high involvement services, the use of pledges in advertisements of hedonic low-involvement services results in the lowest purchase intentions compared to either ads with hedges or ads without probability markers.*

Utilitarian services are, however, much more pragmatic and practical than hedonic ones. They are characterized by low levels of employee-customer contact, moderate customization and higher product-orientation than hedonic services (Stafford and Day, 1995). All this makes them much less individualized and person-specific, enabling easier objective assessment of service quality and customer satisfaction, which depends mainly on the functionality of their consumption (Voss et al., 2003), based on an almost universal set of characteristics that ensure optimal functionality. Using pledges in advertisements of utilitarian services, therefore, signals the advertisers' full confidence in the truthfulness of the claim (Areni, 2002), thus enhancing its persuasive power. A hedge in an advertising copy for a utilitarian service, on the other hand, might create the impression that the advertiser is not willing to stand behind the claim 100%, weakening the claim itself, and undermining the advertiser's authority, credibility, and status (Berney-Reddish and Areni, 2006). This would result in decreased efficiency of the advertisement. We, therefore, posit:



*H2a: Contrary to high involvement services, the use pledges in advertisements of utilitarian low-involvement services result in the highest purchase intentions compared to either ads with hedges or ads without probability markers.*

*H2b: Contrary to high involvement services, the use of hedges in advertisements of utilitarian low-involvement services result in the lowest purchase intentions compared to either ads without probability markers or those with pledges.*

A number of studies from the fields of marketing, communications, and linguistics have proven that language power, which can be signaled by, among others, probability markers, has a strong impact on persuasion (e.g., Areni, 2003; Areni and Sparks, 2005). In addition to that, many advertising studies found a strong mediating role of the response towards the advertisement itself for advertising effectiveness in terms of brand effects (e.g., Mitchell and Olson, 1981). Hedges or pledges may lead to a smaller or greater persuasiveness of the message (see before). We expect that this persuasiveness of the advertisement intervenes between the stimulus (advertisement containing the probability marker) and the response (purchase intention). Probability markers affect consumers' purchase intentions because they influence persuasiveness of the advertising, making an ad either believable or not. In other words, persuasiveness of the advertising copy can mediate the relation between the use of probability markers in advertising and consumers' purchase intentions. We expect that:

*H3: The effects of the use of probability markers in advertisements on consumers' purchase intentions are mediated by the persuasiveness of the message used in the advertisement.*

The hypotheses are tested in two studies, one in Croatia and one in Belgium.

### 3 Study 1

#### 3.1 Procedure

To eliminate possible confounds in the main experiment, two pretests were conducted on a small convenience sample of business students ( $N_1 = 48$ ,  $N_2 = 27$ ). The first pretest was designed to flesh out the appropriate services to include in the study. First, a list of services that college students regularly purchase and use was compiled by asking several students we came in contact with to state the services they had used recently. The final list included the following 16 services: airline, bank, bar, cable television provider, cinema, copy/print shop, credit card, fitness studio/gym, foreign language school, graduate school, hair salon, internet

service provider, mobile phone service provider, night club, sandwich shop, and travel agency.

Sixteen services were tested on a 7-point scale (1 = low, 7 = high) for the level of involvement (Zaichkowsky, 1994) and on a 5-point scale (1 = utilitarian, 5 = hedonic) for the degree to which each of the services was either hedonistic or utilitarian in nature (Voss, Spangenberg, and Grohmann, 2003). The results showed that a graduate school was the best option for a utilitarian ( $M = 2.042$ ) high-involvement ( $M = 6.369$ ) service, a copy/printing shop for a utilitarian ( $M = 1.401$ ) low-involvement ( $M = 3.448$ ) service, a bar for a hedonic ( $M = 4.828$ ) high-involvement ( $M = 5.588$ ) service, and a sandwich shop for a hedonic ( $M = 3.641$ ) low-involvement ( $M = 3.828$ ) service. The significant differences between the services for the two dimensions are verified by t-test ( $p < .05$ ). These four were, therefore, chosen for this study.

Once the appropriate services were chosen, four advertisements were created first, one for each service, containing no probability markers. The advertisements were kept simple and as uniform across services as possible, to avoid any confounding bias. Each advertisement included one visual element (a photograph of a physical element of the service, e.g. a sandwich for the sandwich shop or a copy machine for a copy/print shop), the location of the service provider, and one verbal claim. Within a service, everything was kept constant, except for the verbal claim. Since ad likeability is a potential confound, the second pretest ( $N = 27$ ) was conducted to confirm that there were no significant differences in ad liking (Madden, Allen and Twible, 1988) between the four ads ( $F(3, 26) = 1.874$ ,  $p = .141$ ). Next, two more versions (containing either a hedge or a pledge) of advertisements were created for each of the four conditions, resulting in twelve ads. Three very similar verbal claims were created. First the one without any probability markers was created, and then the other two versions were made by inserting either a hedge or a pledge into the original claim, thus keeping the differences between claims to the minimum. A 2 (service type: hedonic, utilitarian) x 2 (involvement: high, low) x 3 (probability marker: hedge, pledge, no marker) between-subjects experiment was carried out to test the aforementioned hypotheses.

Each version of the main questionnaire started with a welcome screen, on which the participants were greeted, quickly briefed about the study, and instructed on how to proceed with filling out the questionnaire. The participants were allowed to proceed through the questionnaire at their own pace, and not instructed to spend any more or less time on any one question, in order to simulate, as much as possible, natural advertisement processing, and not create a forced high-involvement situation. The welcome screen was followed by some warm-up personality and experience-with-the-service questions, after which the

participants were exposed to the image of an advertisement for an appropriate service (depending on the treatment group they were a part of). The surveys were designed in such a way that each time a new participant entered the questionnaire, one of three possible versions of the same advertisement appeared, chosen randomly by the survey software SurveyMaster. In this way each participant was randomly exposed to either the advertising copy containing a hedge, a pledge, or one with no probability markers. After being exposed to the advertisements, participants were asked whether the ad they had just seen reminded them of any particular brands. Those who answered positively were later eliminated from the analysis, since their answers could have been influenced by their attitude towards those brands.

*Table 1: Probability marker manipulations by product*

<i>Service</i>	<i>Marker</i>	<i>Advertising copy (English translation)</i>
Bar	no pm	Come... Relax... Have fun
Bar	Hedge	Come... Relax... You might have fun
Bar	Pledge	Come... Relax... You will definitely have fun
Copy/print shop	no pm	Best quality copies in town
Copy/print shop	Hedge	Probably the best quality copies in town
Copy/print shop	Pledge	Definitely the best quality copies in town
Graduate school	no pm	Reach your careers goals with an MBA from International Business School
Graduate school	Hedge	An MBA from International Business School might help you reach your career goals
Graduate school	Pledge	An MBA from International Business School guarantees you will reach your career goals
Sandwich shop	no pm	Come to Tace Tee's – your taste buds will thank you!
Sandwich shop	Hedge	Come to Tace Tee's – your taste buds might thank you!
Sandwich shop	Pledge	Come to Tace Tee's – we guarantee your taste buds will thank you!

A semantic scale, originally developed by Gurhan-Canli and Maheswaran (2000), was used to measure the persuasiveness of the verbal arguments presented in each advertisement. Several filler questions were inserted between this and the next scale in order to avoid common method variance. The answers to these filler questions were used as control variables in the analysis of the results

(age, gender). Finally, a Likert scale based on the one used by Dodds, Monroe, and Grewal (1991), as well as other researchers in the field, was used to measure purchase intention for the service advertised. The last screen of the questionnaire included a short message debriefing the participants and thanking them for their participation in the survey. The independent variables (high/low involvement, hedonic/utilitarian service, hedge/pledge/no probability marker in the ad manipulations) were treated as between-subjects factors. The hedges used in the advertisements were “might” and “probably”, and the pledges used were “definitely” and “guarantee”. These specific hedges and pledges were chosen as simple, archetypal examples of probability markers, which clearly qualify the claim made in the advertisement and sound realistic when inserted into the no-treatment copy (Berney-Reddish and Areni, 2006).

As stated previously, the advertisements were kept simple and every effort was made to maintain as much uniformity as possible between and within service type, involvement, and probability marker manipulations. Within each service type/involvement manipulation, the sole difference between advertisements was the actual probability marker used, which was inserted into the control condition claim containing no probability markers, to ensure the highest degree of certainty that the results are attributed to the actual effect of the probability markers, without the interference of the other elements of the advertisement. All the scales in the questionnaire, as well as the ones used in the pretests, were translated and back-translated prior to their inclusion. Cronbach Alpha's of above .70 for each of the translated scales ensures that internal consistency of the scales was maintained in the translated versions.

### 3.2 *Sample*

The participants in the study were college students from a number of public and private universities in Croatia. The mailing lists for the study were obtained from the university registrar's offices. The participants were randomly assigned to one of the four treatment groups and sent an e-mail with the appropriate online questionnaire. Out of approximately 1300 students who received an email inviting them to participate in the study by filling out the online questionnaire, 448 (just under 35%) eventually took part. Once the incomplete responses, as well as those with a positive answer to the question whether the advertisement in the questionnaire prompted associations with an existing brand (in total, 74 of them), were eliminated we were left with a sample size of 374 usable responses.

The analysis of the sample demographics shows that 41.6% of the participants were male and 58.4% were female. The majority of them (52.2%) were between the ages of 22 and 26. The remainder fell into the following age groups:

30.2% between the ages of 18 and 21, 11.5% between the ages of 27 and 30, 5.3% under 18, and 0.8% over 30. Thus, it can be concluded that the sample represents a natural distribution of age and gender for college students.

### 3.3 Results

A between subjects ANOVA was conducted to test H1 and H2. As expected, the three-way interaction effect is significant ( $F(7, 352) = 24.078, p < .001$ ). As expected in H1 and H2, based on Bonferroni post-hoc tests, probability markers have no influence on PI in the case of high-involvement services ( $F(2, 189) = .345, p = .709$ , be it a hedonic ( $p = .637$ ), or a utilitarian ( $p = .476$ ) service. In the case of low-involvement services, the presence of probability markers in the advertisement was found to affect consumers' purchase intentions significantly for both hedonic ( $F(2, 86) = 36.703, p < .001$ ) and utilitarian ( $F(2, 89) = 48.208, p < .001$ ) services. For low-involvement hedonic services, Bonferroni post-hoc comparisons show that the use of a hedge in the ad generates significantly the highest PI ( $M = 4.258$ ) compared to no probability markers ( $M = 2.630, p < .001$ ) and the use of a pledge ( $M = 2.181, p < .001$ ), which provides support for H1a. Although the use of pledges results in the lowest PI, as expected in H1b, Bonferroni post-hoc comparisons show that difference in PI scores is not statistically significant compared to no probability markers ( $p = .090$ ). H1b is partially supported. In the case of low-involvement utilitarian services, the results show significantly higher purchase intentions for advertisements using pledges ( $M = 3.958$ ) as opposed the ads with hedges ( $M = 2.326, p < .001$ ) or those without probability markers ( $M = 2.630, p < .001$ ), supporting H2a. Again, although the use of hedges results in the lowest PI, as expected in H2b, Bonferroni post-hoc comparisons show that the difference with those without probability markers fails to reach statistical significance ( $p = .282$ ). H2b is partially supported.

To test H3, we conducted a mediation analysis following the steps suggested by Baron and Kenny (1986). The first step involves regressing probability markers, service types, and the level of involvement on purchase intention. This was done in the previous analysis, and revealed a significant three-way interaction effect. In the second step results showed that the interaction of the three independent variables also has a significant impact on the mediator, the persuasiveness of the arguments ( $F(7, 373) = 25.893, p < .001$ ), and these results are similar to those of the analysis on PI. In the third step, in which message persuasiveness was added as a covariate in the PI ANCOVA, results demonstrated that the persuasiveness of the arguments has a significant impact on PI ( $F(1, 352) = 266.767, p < .001$ ) and that effect of the three-way interaction of involvement/product type/probability markers on PI remains significant

( $F(7, 352) = 6.261, p < .001$ ). However, the inclusion of the persuasiveness of the argument variable into the model leads to a substantial decrease of the size of the effect (from .331 to .114), showing evidence of partial mediation. The relevance of mediation was further confirmed with a Sobel test, which indicated that persuasiveness of the argument significantly mediated the impact of involvement/service type/probability marker on purchase intention ( $p_{\text{Sobel}} < .001$ ). Therefore, it can be concluded that H3 is supported (see Figure 3).

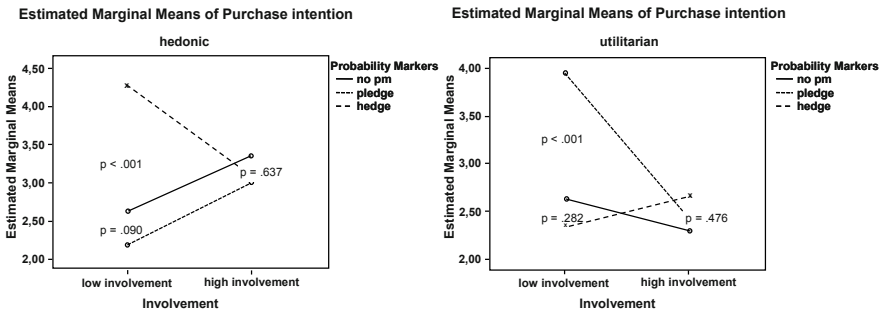


Figure 1: Study 1 interaction effect between type of service and type of probability marker in Croatia

## 4 Study 2

### 4.1 Procedure

To test the robustness of the results of Study 1, a second experiment was carried out. The same procedure and stimuli developed in the first experiment were used again, but in the context of a different culture, as the study was mirrored on Belgian (Flemish) consumers. Since the native language of the respondents was Dutch, the only changes that were made were those relating to language. All the stimuli and the questionnaires were translated and back-translated into Dutch. Once again, the Cronbach Alpha's of all the translated scales reached .70 or above.

### 4.2 Sample

In Belgium, the survey was e-mailed to 1800 students from three large state universities. The participants were, again, randomly assigned to one of the four treatment groups and sent an e-mail with the appropriate online questionnaire. Ultimately, 343 of them responded (19%), out of which 331 were usable ( $N_{\text{Bel}} = 331$ ). The analysis of the sample demographics shows that 46.1% of the

participants were male. The majority of respondents were from the 22 to 26 (38.4%) and the 18 to 21 (36.5%) age groups. The remainder fell into the following age groups: 20.6% under 18, 3.2% over 30, and 1.3% between 27 and 30.

### 4.3 Results

Mirroring Study 1, a between subjects ANOVA was conducted to test H1 and H2. The impact of the three-way interaction effect of involvement\*service type\*probability marker on PI was, again, significant ( $F(7, 326) = 4.149$ ,  $p < .001$ ). The Bonferroni post-hoc tests confirm that, as expected in H1 and H2 and evidenced by the results of Study 1, probability markers have no influence on PI in the case of high-involvement hedonic ( $p = .554$ ) or utilitarian ( $p = .814$ ) services. In the case of low-involvement services, Study 2 results also confirm the results of Study 1 - the presence of probability markers in the advertisement affects consumers' PI significantly for both hedonic ( $F(2, 90) = 6.667$ ,  $p = .002$ ) and utilitarian ( $F(2, 88) = 9.362$ ,  $p < .001$ ) services.

In the case of low-involvement hedonic services, Bonferroni post-hoc comparisons show that the use of a pledge in the advertisement generates significantly the lowest PI ( $M = 2.1814$ ) compared to no probability markers ( $M = 2.3824$ ,  $p = .014$ ) and hedges ( $M = 2.7442$ ,  $p < .001$ ), which provides support for H1b. Although the use of hedges results in the highest PI, as expected in H1a, Bonferroni post-hoc comparisons show that difference in PI scores is not statistically significant compared to no probability markers ( $p = .384$ ). H1a is partially confirmed. For advertisements featuring low-involvement utilitarian services, the results show significantly higher PI when pledges are used in the ad ( $M = 3.0161$ ) as opposed to the ads with hedges ( $M = 2.0093$ ,  $p = .003$ ): However, the difference between the ads with pledges and those without probability markers is not significant ( $M = 2.8286$ ,  $p > .999$ ). H2a is partially confirmed. As expected in H2b, the use of hedges in low-involvement utilitarian service ads results in the lowest PI, compared to both ads with pledges ( $p = .003$ ) and those without probability markers ( $p = .015$ ).

To retest H3, we again conducted a mediation analysis following the steps suggested by Baron and Kenny (1986). As we have already shown a significant three-way interaction effect of probability markers, service type and the level of involvement on PI, the first step of the mediation analysis is satisfied. In the second step results showed that the interaction of the three independent variables also has a significant impact on the mediator, the persuasiveness of the arguments ( $F(7, 326) = 7.373$ ,  $p < .001$ ). In the third step, in which message persuasiveness was added as a covariate in the PI ANCOVA, results demonstrated that the persuasiveness of the arguments has a significant impact on PI

( $F(1, 323) = 64.524, p < .001$ ) and that effect of the three-way interaction of involvement/product type/probability markers on PI remains significant ( $F(7, 326) = 4.149, p < .001$ ). Additionally, unlike in the Study 1, the inclusion of the persuasiveness of the argument variable into the model did not lead to a substantial decrease of the size of the effect (from .084 to .080). These results show that H3 is not supported in Study 2.

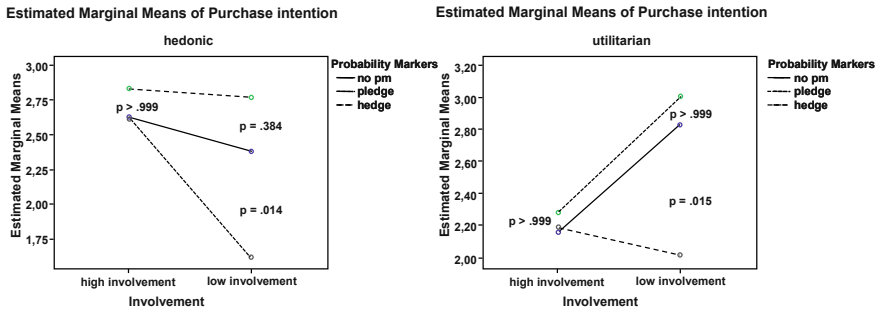


Figure 2: Study 2 Interaction effects between type of service and type of probability marker in Belgium

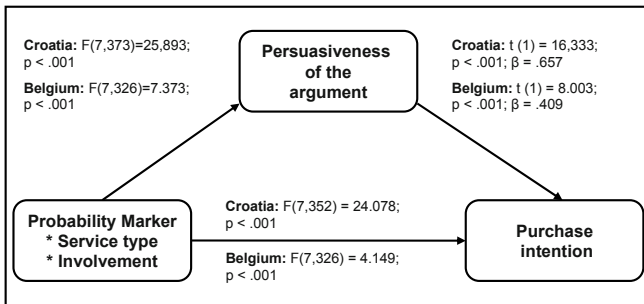


Figure 3: The mediating role of argument persuasiveness for the relation between service type and probability marker type on purchase intention in Croatia and Belgium

### 5 Conclusions and suggestions for further research

One of the major theoretical contributions of this study is the differentiation between high- and low-involvement services which provides an explanation for the failure of the previous studies to find significant impact of the use of probability markers in advertising. Following the postulates of the Elaboration Likelihood Model, probability markers have no impact on the effectiveness of adver-



tising of high-involvement services. Our study also contributes to the general theory and body of research on the impacts of the usage of probability markers in advertising, by focusing on this usage in the advertising of services and introducing the hedonic vs. utilitarian dimension into the equation. The interaction between involvement, service type (hedonic/utilitarian), and type of probability marker used in the advertising copy (hedge, pledge, no probability marker) on customers' purchase intentions became evident. Marketers should not only take the level of involvement into account when making an advertisement about a service, but also the type of service. For hedonic low-involvement services, which are experiential, subjective, and very person-specific in nature, advertising claims that include hedges have been found to be the most effective, resulting in the highest levels of purchase intentions. It seems that such claims may be inciting heightened perceptions of honesty/credibility and persuasiveness of the advertiser in the eyes of the consumer, whereas a claim containing an absolutistic pledge would not only be easy to counter-argue and dismiss, but would also have the opposite effect on purchase intentions. On the contrary, advertisements for utilitarian low-involvement services seem to work better when they include a claim containing a pledge. Pledges in this case, where the service is much less customized and person-specific, and considerably easier to evaluate objectively (making it also easier to compare its universal functional characteristics to other similar services with certainty), signal the strength of the advertisers' convictions in absolute truthfulness of the claims contained in the advertising copy. Persuasiveness functions as a partial mediator.

The robustness of most results across the two studies provides strong evidence of the effectiveness of probability markers in advertising of low-involvement hedonic and utilitarian service. Culture, however, seems also to play a role in the impact that probability markers have on purchase intentions, as well as on the function of persuasiveness as the mediator. Croatian consumers display a higher general preference for probability markers than Belgian consumers. Additionally, in Croatia, persuasiveness does act as a mediator of the probability marker\*service type\*involvement interaction effect on purchase intention, while for Belgian consumers no such mediation takes place. As these two studies do not provide an insight into the reasons and underlying mechanisms for the said differences, further research into the role of culture on the effectiveness of probability markers in advertising is called for.

This study also has limitations that provide other opportunities for further research. Each of the treatment conditions in this study was represented by one service only. In addition to that, the brand names used in the stimuli did not represent existing brands. Although these steps were taken to minimize the possibility of confounding variables influencing the results of the study and to maximize the internal validity of the study, future research should endeavor to test

the conclusions of this study using more than one service per type and existing brand names. It should also be noted that the results of the present study rely on a sample of undergraduate students. Although every effort was taken to ensure that the services used in the study were appropriate for a student sample, and such homogeneous samples have often been used in past studies to maximize statistical power (Berney-Reddish and Areni, 2005), this comes at the cost of external validity. Generalizations of the findings of the study should, therefore, be made with caution, and additional research might be needed to strengthen the validity of the above reported results for other population contexts. Finally, ad persuasiveness only partially mediates the effect of probability markers on purchase intention, and only in one culture (Croatia). There might be other variables that contribute to this relationship, such as personal or cultural characteristics of the respondents, attitude towards the ad, pro- and counter-argumentation, and message credibility, which were not examined by the present study. Future research should take into account the impact of these variables and test the effects of probability marker usage on them, as well.

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# Emotional Responses to Nature in Advertising and Real Nature

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## 1 Introduction

Research stretching over several decades shows that contact with nature has inherently positive emotional, cognitive and physiological effects on human beings (e.g., Frumkin, 2003; Han, 2009; Hartig et al., 1991; Hartig et al., 2003; Korpela et al., 2001; Ulrich, 1984). Attention restoration theory (Kaplan, 1995) and Ulrich's (1981) psycho-physiological stress reduction framework proclaim that visual encounters with natural scenes, compared to most urban scenes lacking natural elements such as trees, reduce stress and enhance cognitive functioning.

Several research studies address the correspondence between behavioural responses to real nature and photographic representation of nature, focusing on aesthetic preference and beauty rating as components of positive affect, together with several other more cognitive features of landscape perception. With respect to the analysed dimensions, photos seem to simulate natural environments reasonably well (e.g., Coeterier, 1983; Hull IV and Stewart, 1992). Since beneficial effects of natural environments are seemingly not limited to interaction with genuine nature, but can as well be derived from exposure to nature in photographic images or multi-media recordings, the exposure to images of natural scenes is often employed as surrogate for interaction with nature (e.g., Kaplan and Kaplan, 1989; Ulrich, 1981; Ulrich et al., 1991).

Nature imagery is widely used in advertising, in part attributable to the increasing popularity of green advertising. Pictures of nature in advertising could potentially lead to the whole range of behavioural effects suggested for interaction with nature, in particular, positive affect, as well as favourable influences on cognitive processing. Previous research has not yet addressed the comparison of nature imagery with real nature in a wider range of emotional dimensions than the abovementioned studies on positive affect. Specific emotional responses to natural scenes in advertising so far have been analysed in only one study (Hartmann and Apaolaza-Ibáñez, 2010). The present study compares emotional responses to advertising featuring natural representations with those to actual nature. The confirmation of a significant degree of equivalence of the emotions by advertising displaying natural imagery with those derived from direct encounters

with real nature would imply that beneficial emotional, cognitive and physiological effects could also be expected from exposure to such advertising.

## 2 Theoretical framework

Ample research evidence from the fields of psychology and medicine proves that contact with nature has generally some inherently positive emotional effects (Frumkin, 2003). In particular, natural environments have been shown to exert more positive influences on emotions than urban environments (Hartig et al., 1991; Maller et al. 2006; Ulrich, 1981; Ulrich et al., 1983; Ulrich 1984). The positive emotional effects of nature are relevant for stress reduction (Ulrich et al., 1991) and psychological restoration (Kaplan, 1995, 2001). Steven and Rachel Kaplan's (1989, 1995) Attention Restoration Theory (ART) refers to the observation that contact with nature leads to recovery from mental fatigue, that is, the exhaustion of directed attention. ART highlights an important cognitive effect of visual encounters with nature suggesting that they restore human's capacity to pay attention. According to ART, interacting with nature improves performance on attention and memory related tasks. Since ART has been put forward, several studies have provided empirical evidence for the hypothesized effects (e.g., Berman et al., 2008; Berto, 2005; Hartig et al., 2003).

Advertising featuring natural scenes can potentially harvest beneficial behavioural effects of nature in several ways. Positive emotional responses to pictures in advertising have been shown to enhance attitude toward the advertisement and the brand (e.g., Batra and Ray 1986; Edell and Burke 1987). Pictures or video recordings of pleasant natural landscapes in an advertisement can evoke positive affect, which in turn exerts positive influences on attitude toward the brand (Hartmann and Apaolaza-Ibáñez, 2010). Further research shows that green advertising featuring pleasant natural scenes can condition a brand with specific emotional 'virtual' nature experiences. 'Virtual' nature experiences associated with a green brand deliver additional psychological brand benefits (Hartmann and Apaolaza-Ibáñez, 2009). While the discussed effects are principally emotional, positive cognitive influences on advertising effectiveness could be expected as well. ART postulates that exposure to nature improves attention and memory. Thus, nature imagery in advertising may lead to an increase in attention toward the advertisement and post-exposure recall. It can be speculated that natural scenes in advertising may enhance elaboration and memory of advertising messages and brand associations.

A fundamental prerequisite for the hypothesized effects of natural advertising imagery is the correspondence of behavioural responses to encounters with natural environments and visual representations of these environments. A number of studies have addressed the validity of photographs as surrogates for natural environments, suggesting that photographic pictures of landscapes, plants, animals, and water can have similar effects to the genuine objects (Bosselmann and Craik, 1989; Coeterier, 1983; Hull IV and Stewart, 1992; Nassauer, 1982; Penning-Rowsell, 1981; Shuttleworth, 1980; Zube et al., 1987). In fact, many of the cited studies on behavioural effects of nature are indeed based on photographic pictures of nature as surrogates for natural environments. Consequently, many of the observed beneficial outcomes are really responses to visual representations of nature instead of actual natural environments (e.g., Kaplan and Kaplan, 1989; Ulrich, 1981; Ulrich et al., 1991). Therefore it can be assumed that emotional responses similar to those evoked by “genuine” natural scenes can be set off using photographs or video recordings as used commonly in advertising. Exposure to natural advertising imagery may emulate the effects of interactions with nature.

*Research Hypothesis:*

*Appropriate visual representations of natural scenes in advertising evoke emotional responses akin to those experienced in direct contact with natural environments.*

### **3 Method**

With the aim to test the proposed hypothesis, an experimental field study of the emotional responses to advertising with nature imagery as well as to actual nature was carried out. For this purpose, thirteen experimental advertisements were developed featuring an identical brand name and symbol, as well as identical advertising copy and formal structure. The advertisements featured a fictitious green energy product and varied only in the content of the picture displayed. Eleven of the advertisements showed pleasant natural landscapes with vegetation: a beech tree on a meadow, an eucalyptus tree in a low scrub setting, palm trees on a tropical beach, Mediterranean coastline, savannah with trees, a mountain lake with cattle, a savannah setting with elephants, a mountain stream, a landscape with lakes and forests, an oak forest and a pine forest. The remaining two advertisements displayed a vegetation-free rocky desert in the sunlight and a pleasant sunny cityscape with classical and modern buildings without any vegetation (Appendix). A total of 817 valid street interviews were carried out in six towns and villages. Subjects were selected by a combined quasi-random and quota sampling. 726 subjects were exposed randomly to one of the experimental advertisements and subsequently asked to rate six basic emotional responses to the advertisement on semantic differential scales. The emotional dimensions