“Emotional” versus “Emotioneel”: Advertising Language and Emotional Appraisal

Stefano Puntoni

ERIM REPORT SERIES *RESEARCH IN MANAGEMENT*	
ERIM Report Series reference number	ERS-2006-066-MKT
Publication	December 2006
Number of pages	37
Persistent paper URL	
Email address corresponding author	spuntoni@rsm.nl
Address	Erasmus Research Institute of Management (ERIM) RSM Erasmus University / Erasmus School of Economics Erasmus Universiteit Rotterdam P.O.Box 1738 3000 DR Rotterdam, The Netherlands Phone: + 31 10 408 1182 Fax: + 31 10 408 9640 Email: info@erim.eur.nl Internet: www.erim.eur.nl

Bibliographic data and classifications of all the ERIM reports are also available on the ERIM website: www.erim.eur.nl

ERASMUS RESEARCH INSTITUTE OF MANAGEMENT

REPORT SERIES

RESEARCH IN MANAGEMENT

ABSTRACT AND KEYWORDS	
Abstract	The article contributes to current understanding of language effects in advertising by uncovering a previously ignored mechanism shaping consumer response to an increasingly globalized marketplace. Extending recent psycholinguistic research on the emotions of bilinguals, a series of experiments shows that bilingual consumers report greater perceived emotional intensity for stimuli (e.g. ads) presented in their native language than in their second language.
Free Keywords	Bilinguals, Advertising, Psycholinguistic research
Availability	
Classifications	

“Emotional” versus “Emotioneel”: Advertising Language and Emotional Appraisal

STEFANO PUNTONI*

* Stefano Puntoni is Assistant Professor of Marketing, Rotterdam School of Management, Erasmus University, PO Box 1738, 3000 DR, Rotterdam, the Netherlands. Tel.: +31104081184. Fax: +31104089011. E-mail: spuntoni@rsm.nl. The author thanks Patricia Heijndijk, Malini Sietaram, Steven Sweldens, Mirjam Tuk, Ralf van der Lans, and Peeter Verlegh for their help with stimuli development and data collection and Martijn de Jong, Maria Galli, Stijn van Osselaer, and Nader Tavassoli for their useful comments. The financial support of the Erasmus Research Institute of Management is gratefully acknowledged.

The article contributes to current understanding of language effects in advertising by uncovering a previously ignored mechanism shaping consumer response to an increasingly globalized marketplace. Extending recent psycholinguistic research on the emotions of bilinguals, a series of experiments shows that bilingual consumers report greater perceived emotional intensity for stimuli (e.g. ads) presented in their native language than in their second language.

English is the new *lingua franca*. From international business to the Internet, from science to music, English is the language of important aspects of the social life of consumers around the world (Cristal 2004). Indeed, it has become commonplace for commentators to identify the rise of English as a world language as one of the most visible aspects of the process of globalization. No area of media production exemplifies the growing importance of the English language better than advertising. Regardless of their cultural heritage and native language, consumers are routinely addressed by large numbers of marketing messages in English. For example, in the Netherlands over 40% of TV ads contain words in English (Gerritsen et al. 2000) and this phenomenon is by no means limited to Western cultures (e.g., Lee 2006).

Calls for an increased focus on the consequences of globalization for consumers (e.g., Johar, Maheswaran and Peracchio 2006) emphasize the need to improve current understanding of how the globalization of advertising language influences consumer response to advertising messages. In particular, no previous research has examined the emotional consequences of marketing messages in English for consumers living in a country where English in not the first language. Generating emotional experiences around a brand is an important goal of brand communication (Keller 1998). For instance, French Connection, a British fashion company, adopted the acronym FCUK in all its advertising presumably in the belief that provocative messages such as “FCUK you!” are beneficial to the brand. The globalization of advertising implies that marketing messages are increasingly delivered in a language that is different from consumers’ native tongue. For example, the acronym FCUK has been advertised to consumers in over 20 countries where English is not an official language. This raises the question of whether and how language might affect consumer response to ad campaigns aimed at triggering certain emotional reactions.

The field of linguistics is displaying a growing awareness of the role of emotional processes in bilingualism (e.g., Dewaele and Pavlenko 2004; Pavlenko 2005; 2006). Extending recent literature on the emotions of bilinguals, this article investigates the consequences of the globalization of advertising language by focusing on the perceived emotionality of textual information. A series of studies shows that consumers tend to rate the emotional intensity of an ad higher when this ad is presented in their native language (L1) than when it is presented in a second language (L2).

THEORY

Consumer research on bilingualism can be categorized in two areas.[1] The first adopted a sociolinguistic approach to examine the signaling functions of language in the context of ethnic minority targeting (e.g., Koslow, Shamdasani, and Touchstone 1994; Luna and Peracchio 2005). The second adopted a psycholinguistic approach to explore the information processing consequences of language (e.g., Luna and Peracchio 2001; Tavassoli and Lee 2003; Zhang and Schmitt 2001; 2004). The present investigation shares with this second stream of research the stress on psycholinguistic processes but differs from existing consumer research in its attention to emotional appraisal. Four theories of the effect of language on emotional appraisal are presented in the next subsections. Two theories predict that ads will be perceived as more emotional when presented in L1 than L2 (emotional advantage of L1). Two other theories predict

[1] Following scholars in the area of bilingualism, a bilingual is defined as a speaker of two languages (e.g., Pavlenko 2005). Contrary to lay meaning, this definition does not require an equal or similar level of proficiency in the two languages. “First language” and “native language” are used interchangeably to refer to the language learned first (L1). “Second language” and “foreign language” refer instead to a language learned later in life (L2).

instead that ads will be perceived as more emotional when presented in L2 than L1 (emotional advantage of L2).

Predicting an Emotional Advantage of L1 Ads

Linguistic Experience and Emotion Identification. Linguistic experience is an important determinant of a person's ability to interpret and appraise emotional expression (e.g., Harris 2000). For example, native speakers perform better than nonnative speakers when asked to identify verbal emotional expression (see Pavlenko, 2005, pp. 55-68, for a review). Importantly, the advantage of native speakers is not solely a function of differences in comprehension because the effect can be probed using very simple sentences and even language-free (i.e., nonsensical) speech samples (Scherer, Banse and Walbott 2001). If for consumers it is easier to appraise the emotional content of information presented in L1 than in L2, this should have repercussions for the perceived emotional intensity of ads presented in L1 versus L2. More specifically, L2 ads should be rated as less emotional than L1 ads as a consequence of consumers' greater ability to appraise emotional expression in L1 than in L2.

Context of Learning and Emotional Meaning. This account focuses on the contexts of language learning and use to predict an effect of language on emotional appraisal (Harris, Gleason, and Aycicegi 2006). L1 is associated to highly emotional contexts, such as family life (Amati-Mehler, Argentieri, and Canestri 1993; Pavlenko 2005). These emotional associations are generally missing in the case of L2, which is usually learned in instructed contexts. For instance, the majority of bilingual Europeans developed its L2 skills during secondary education

(Eurobarometer 2001). This difference in the emotionality of the contexts of language learning and use should lead L1 words to acquire over time stronger emotional associations than L2 words (van Osselaer forthcoming). If "associative learning causes language forms to be stored with their context of use" (Harris et al. 2006, p. 273), L1 words should trigger stronger emotional experiences than their L2 equivalents. In an advertising context this translates into the prediction that L1 ads should be rated as more emotional than L2 ads.

Predicting an Emotional Advantage of L2 Ads

Decreasing Emotional Sensitivity to Repeated Behavior. All major theories of self-regulation predict a reduction in the intensity of the emotional reaction associated to a certain behavioral expression with an increase in its frequency of occurrence (Wood, Quinn, and Kashy 2002). The reason for this reduced emotional sensitivity to repeated behavior lies in a process of habituation (Frijda 1988), which leads individuals to "adapt psychologically and physiologically to the emotion-inducing aspects of repeated behaviors in a way that reduces emotional intensity" (Wood et al. 2002, p. 1283). In the current setting of bilinguals who live in a country where L1 is the dominant language, L2 cues are less prevalent in consumers' lives (i.e., in both their present and past experience) than L1 cues. To the extent that reading information in L1 can be construed as a more habitual act than reading in L2, a process of habituation should reduce the ability of L1 ads to elicit strong emotional reactions, leading to an emotional advantage of L2 ads.

Attentional Consequences of Stimulus Unfamiliarity. Cues belonging to a class of less familiar stimuli tend to command a greater level of attention (e.g., Berlyne 1960). The increase

in attention, in turn, leads to more elaboration (e.g., Greenwald and Leavitt 1984). If consumers are more familiar with reading L1 material than L2 material, L2 ads should attract greater attention and lead to increased cognitive processing. For example, the use of foreign language in advertising has been linked to an increase in depth of advertising processing (Domzal, Hunt, and Kernan 1995). In appraisal theories of emotion (e.g., Lazarus 1991) cognitive processing serves as an antecedent of emotional appraisal. This account therefore argues that less familiar stimuli such as L2 ads should have a greater likelihood of capturing the attention of consumers, leading to increased elaboration and greater perceived emotional intensity.

Empirical Evidence

Using both general self-reports (Dewaele 2004) and physiological measures (Harris, Aycicegi, and Gleason 2003), research on taboo words and swearwords has shown that the perceived emotional intensity of these highly emotional words is greatest in one's native language. Moreover, in the context of social interaction, Bond and Lai's (1986) participants found it easier to discuss embarrassing topics in L2 than in L1. Bond and Lai argue that in embarrassing situations switching to a second language serves a distancing function. Based on clinical case studies, Javier (1989) similarly concluded that during therapy sessions switching language represents a coping mechanism for the patient. These studies are consistent with the context of learning and emotional meaning account because L1 was associated to stronger emotional experiences than L2. These settings, however, are all characterized by a combination of extreme emotionality and self-relevance that makes the extrapolation to situations involving the processing of external information of mild emotionality questionable. For example, foreign branding (the strategy of using foreign-sounding brand names) can lead to greater perceived

hedonic value (Leclerc, Schmitt, and Dubé 1994). Moreover, authors have repeatedly found no language effects on self-reported emotional intensity when single words or isolated utterances are presented in two languages (e.g., Anooshian and Hertel 1994; Harris 2004; Rintell 1984).

STUDY 1

No previous research has tested the effect of language on the perceived emotional intensity of narrative texts. This experiment therefore confronted groups of participants with the same narrative text in different languages and assessed whether language affects self-reports of its emotional intensity. A key decision in carrying out an investigation of the consequences of language for emotional intensity pertained to the selection of target languages (L1 and L2). Exploring marketing implications of globalization required the selection of English as L2 language. As for the selection of L1 language, Dutch was chosen as target language in all studies presented below. Greater overlap between L1 and L2 words leads to greater activation of L1 in processing L2 information (e.g., Sunderman and Kroll 2006). This implies that an effect of language should be reduced by an increase in the similarity of target languages. After Frisian (spoken in the Dutch province of Frisia), Dutch is the language that is closest to English (e.g., Finegan 1987) and this implies a conservative test of the effect of language on perceived emotional intensity.

Method

Fifty-four business graduate students (for age, M = 23.98, SD = 2.61, 41% males) at a large Dutch university read “The Selfish Giant,” a children’s story by Oscar Wilde (1888/1999), either

in Dutch or English (27 participants in each condition). As in all studies below, participants were Dutch native speakers fluent in English. Half of participants completed the study at the end of a lecture whereas the remaining half completed the study online. For those who completed the study in class language was manipulated by randomly distributing two different versions of the survey, whereas for those who completed the study online language was manipulated by randomly emailing the link to one of two versions of a website.

"The Selfish Giant" was selected because, although less than 2000 words in length, it portrays a wide range of emotions. Moreover, a Dutch translation was available (Wilde 1987) and participants were not likely to be familiar with the story. Some small changes were made to the original text. The comprehension of the text was simplified by substituting in the English version the words "thou" with "you," "hath" with "has" and "art" with "are." Due to potential heterogeneity in participants' response to religious cues, all references to Jesus and paradise were removed from the conclusive statements of both English and Dutch versions.

After reading the story, participants were asked to evaluate the intensity of 10 emotions as they perceived them portrayed in the text (rated using Dutch rating scales). The target emotions had been selected from the list collected by Richins (1997; study 4) for their relevance to the story. These were: anger, fear, happiness, irritation, joy, loneliness, love, tenderness, sadness, and sentimental (nine-point scales from "not present at all" to "very much present"). Participants were then asked to report their proficiency in English using two items, one for speech and one for writing (five-point from "very poor" to "almost perfect"), to rate how easy it was to understand the text, and finally to provide some basic demographic information.

Results and Discussion

The ratings for the 10 emotions were averaged to create an index of overall emotional intensity. This index was subjected to an ANOVA with language, mode of completion (in class or online), and their interaction as predictors. Mode of completion was not significant (*p*s > .3). The main effect of language was instead significant, $F(1, 52) = 4.67$, $p < .05$. The L1 text ($M = 5.95$) was rated as more emotional than the L2 text ($M = 5.41$).[2] A similar ANOVA estimated on participants' evaluation of how easy it was to understand the text showed no significant effects (*p*s > .4). Moreover, in a model with proficiency (the average of the two items) as an additional predictor (main effect and interactions) this variable was not significant (*p*s > .25).[3]

A closer look at the data revealed that, although the effect of language was significant in explaining the perceived emotional intensity of only two emotions (loneliness, $t(52) = 2.76$, $p < .01$, and joy, $t(52) = 1.86$, $p < .07$), for eight of the 10 emotions the Dutch version was perceived as directionally more emotional than the English version (.14 < *p*s < .46). Moreover, the two emotions that were rated higher in the English version (tenderness and sentimental) were also the two where language had the smallest explanatory power ($p > .9$ and $p > .59$ respectively).

The results of this study provide support for an emotional advantage of L1. Participants rated "The Selfish Giant" as more emotional when they read the Dutch version of the story than when they read the English version.

STUDY 2

[2] The appropriateness of this procedure was assessed in an additional repeated-measures ANOVA with emotion as repeated factor. The emotion by language interaction was not significant ($p > .2$) while the main effect of language was unchanged.

[3] Similar analyses using different measures of proficiency were performed on the data of study 2 and 3 and also failed to show a moderation of this variable. It is likely that the average level of proficiency for the participants in these studies was too high for an effect of this variable to be detected. This variable will not be further discussed.

Images are important vehicles of advertising meaning and a manipulation of the language of textual elements may therefore have little effect on the perceived emotional intensity of ads including visual information. No research has so far investigated language effects on emotional appraisal when exposure to textual information is accompanied by other cues for emotional intensity. Nevertheless, the presence of congruent visual information has been shown to increase bilinguals' ability to process L2 messages (La Heij et al. 1996). For example, Luna and Peracchio (2001) found no memory difference between L1 and L2 ads when a congruent picture was featured in the target ads. Relatedly, due to space constraints, ads contain a generally limited amount of textual information. Again, this puts into question the generalizability of the results of study 1 to an advertising setting. The goal of study 2 was therefore to extend the results of study 1 to ads. Participants rated print ads (some in L1 and some in L2) along a number of dimensions.

Study 1 assessed the influence of language via the main effect of language on emotional appraisal but it is possible that this language effect is not specific to emotional appraisal. In study 2 the assessment of emotional appraisal was therefore complemented with that of attitudes towards the ad and the influence of language was then tested via the interactive effect between language of stimuli and type of appraisal. Attitudes were selected for a number of reasons. Firstly, the central role of attitudes in consumer research makes this a construct of high theoretical and practical interest. Secondly, expressions of liking or disliking are common judgments in an advertising context and participants were therefore likely to be familiar with the task. Thirdly, and more importantly, using attitudes to test whether the effect of language is specific to emotional appraisal allows assessing boundary conditions to the effect of language on affective processes. Emotional reactions triggered by an object are an important determinant of attitudes towards the object. For example, research has demonstrated that emotional responses to

ads are important predictors of attitudes towards the ad (e.g., Edell and Burke 1987). However, contemporary theories of attitude structure converge on the stance that “an attitude is an entity distinguishable from the classes of affect, behavior, and cognition. An attitude, therefore, does not consist of these elements, but is instead a general evaluative summary of the information derived from these classes” (Fabrigar, Macdonald, and Wegener 2005, p. 82). Study 2 therefore assessed whether a language effect on the perceived emotional intensity of ads can translate into a parallel effect on overall ad evaluations.

In order to provide a reliable test of the type of appraisal by language interaction, the assessment of emotional appraisal was carried out with a simple global evaluation of emotional intensity. This procedural detail has the additional benefit to allow testing another alternative explanation for the results of study 1. It is possible that the significance of the main effect of language in study 1 was a function of the specific emotions selected. Using a global measure of emotional intensity circumvents this issue, hence adding to the validity of the study. In addition to this nonspecific emotional appraisal measure, an assessment of specific emotions (sadness vs. happiness) was also included.

Research on advertising language adopting a sociolinguistic approach has demonstrated consumers’ propensity to formulate inferences about the meaning underlying advertisers’ choice of using a specific language to deliver their message (e.g., Koslow et al. 1994). Although these studies have focused on ethnic minority targeting, research provides some evidence for the existence of such inferences in an international context (e.g., an association between English and modernity; e.g., Lee 2006). To test the effect of language on emotional appraisal independently from the effect of such inferences, it was important that participants were deterred from making inferences about the reasons behind the choice of English. The choice of language was therefore

presented as entirely natural by mentioning in the introductory instructions that some of the ads would be from the U.K. market and some from the Dutch market.

Method

Design and Participants. Type of appraisal (emotional intensity vs. attitudes) and language of stimuli (L1 vs. L2) were manipulated within-subjects. Order of ad exposure and language sequence were moreover counterbalanced between-subjects by randomly changing across participants the order in which the ads appeared in the booklet and the sequence of Dutch and English ads. Two ad orders and language sequences were used (across the four versions of the booklet each ad was therefore displayed twice in each language). Participants were 106 Dutch business students attending postgraduate studies held in English who completed the experiment in return for course credit (for age, $M = 23.21$, $SD = 1.8$, 45% females).

Stimuli. In order to maximize experimental control the study used purposely-created print ads. Eight ads were produced to represent a broad spectrum of advertising appeals and sponsoring organizations. The ads featured a nonsensical brand name as well as verbal and visual information and promoted a variety of products and causes. Table 1 describes the ads.

Table 1 about here

The only difference between the English and Dutch versions was the language of the textual information. The ads were initially created in English. A Dutch doctoral student translated the ads into Dutch. In order to obtain a perfect match between the two versions, during this process the English versions were updated when needed. The accuracy of the Dutch

translation was then assessed by a comparison with the back-translation of the ads to English performed by a second Dutch doctoral student. The first ad order was randomly created and the second was generated inverting the first one. The two language sequences were similarly generated. Ads were presented on separate pages. Each ad covered approximately half a page.

Procedure and Measures. During a mass session held in a lecture theatre participants were given a booklet containing nine ads and were asked to rate each of them on a series of nine-point semantic differentials. All questions and instructions were in English. The first page introduced the study as part of an international advertising research project. Participants were made aware of the fact that some of the ads in the booklet came from the U.K. and some from the Netherlands. For all participants, the first ad was one for computer speakers (in English). This filler was added to the booklet to familiarize students with the task.

Two measures of emotional appraisal were used: one nonspecific (anchors were "unemotional"/"emotional" and "unmoving"/"moving") and one specific (anchors were "sad"/"happy" and "sorrowful"/"joyful"). Attitudes were also measured with two items (anchors were "bad"/"good" and "unlikable"/"likeable"). The booklet also included one item to assess the perceived level of difficulty of the ads ("easy"/difficult") and two items to measure the perceived informational content of the ads (anchors were "uninformative"/"informative" and "useless"/"useful"). After rating the ads, to control for a potential moderator, participants also filled out a three-item scale to measure attitudes toward the English language (Koslow et al. 1994). This construct was not significant in the analyses below and will not be further discussed. Finally, participants completed a short essay where they were asked to describe the purpose of the study before providing some basic demographic information.

Results

An examination of the essays written by participants at the end of the study revealed that none of them had guessed the purpose of the study. The essays written by seven participants, however, included a vague reference to language. Exclusion of these participants did not affect the results and these data were retained in the analyses below. No differences in perceived level of difficulty were observed between L1 and L2 ads ($p > .2$). Stressing the ease of comprehension of the English language for this sample, the Dutch version ($M = 3.4$) was rated as directionally more difficult than the English version ($M = 3.26$). The two items for each measured constructs were averaged. The data were subjected to a repeated-measures ANCOVA with language of stimuli (L1 vs. L2) and type of appraisal (nonspecific emotional intensity vs. attitudes) as within-subjects factors and the ad order and language sequence counterbalancing factors as covariates. Table 2 presents cell means and standard deviations.

Table 2 about here

The language of stimuli by type of appraisal interaction was significant, $F(1, 103) = 12.01$, $p < .001$. Replicating the results of study 1, L1 ads ($M = 5.44$) were rated as more emotional than the L2 ads ($M = 4.98$, $F(1, 103) = 36.67$, $p < .0001$). No effect of language was instead observed for attitudes towards the ad ($F(1, 103) = 1.85$, $p > .15$). The analysis also highlighted a main effect of language. Independently of type of appraisal, ads were overall rated higher when presented in Dutch ($M = 5.36$) than in English ($M = 5.07$, $F(1, 103) = 14.76$, $p < .001$). The main effect of type of appraisal was instead not significant ($p > .7$), as were also those of the covariates (ps > .4). Interestingly, the correlation between the emotionality ratings of the L1 ads and the

discrepancy between the emotionality ratings of the two versions of the ads was positive and significant ($r = .84$, $p < .01$), indicating a larger language effect for more emotional ads (but note the small number of ads used to calculate this correlation).

In the case of nonspecific emotional appraisal the measurement scales assessed the degree of presence of an attribute (e.g., “unemotional”/“emotional”). For specific emotional appraisal (e.g., “sad”/“happy), however, the psychological zero lay on the middle of the scale, not on its lowest score. For specific emotional appraisal the discrepancy of the averaged original items from the mid-point of the scale was therefore calculated. The absolute value of this score was then used to assess emotional intensity independently from direction. In an ANCOVA model with ad order and language sequence as covariates, this specific emotional appraisal measure showed a significant effect of language, $F(1, 103) = 21.54$, $p < .0001$. Confirming the results obtained for nonspecific emotional appraisal, the Dutch version ($M = 1.55$) was rated as more emotional than the English version ($M = 1.27$).

Unexpectedly, a significant effect of language was also observed on informational content: L2 ads ($M = 5.63$) were perceived as more informational than L1 ads ($M = 5.2$, $F(1, 103) = 31.49$, $p < .0001$). Informational and emotional values are often pitted against one another, as exemplified by the common dichotomy of heart and mind (e.g., Shiv and Fedorikhin 1999). This raises the question of whether L2 ads may have been perceived as less emotional due to the fact that they were perceived as more informational. To investigate this possibility, the correlation between the measures of nonspecific emotional appraisal and informational value was calculated for each ad. The correlation was significantly different from zero for five of the eight ads but in

all these cases the sign was positive, ruling out this negative correlation explanation for the effect of language on emotional appraisal.[4]

Discussion

Study 2 provides support for the emotional advantage of L1 ads, hence confirming the results of study 1. L1 ads were rated as more emotional than their L2 equivalent. The key finding was replicated with two measures of emotional appraisal, one specific and one nonspecific. No effect of language was found on attitudes. This suggests that the influence of language on affective processes results in changes of the appraisal of the emotional content of the ads but not necessarily of their overall likeability.

An important feature of this experiment was the explicit mention of the country of origin of the ads. This procedural detail was included to discourage consumers from pondering about the implications of advertisers' choice of using English vocabulary. Although this criticism does not apply to the results of study 1, one could argue that the results arose, at least partly, as a consequence of a systematic influence of the country of origin on consumer response to the ads. An experiment was carried out to test this contention by estimating the influence of country of origin independently from language. This experiment manipulated country of origin (Dutch vs. foreign) between-subjects and the presence of textual information (text vs. no text) and type of

[4] Eighteen foreign students who were present in the room at the time of the experiment were provided with a booklet with all ads in English (13 were L2 speakers of English and the rest native English speakers). The ratings of nonspecific emotional intensity from these participants were compared in a series of t-tests (computed using Satterthwaite's method due to the small sample size) to those obtained from Dutch native speakers. These tests validate the previous results. English native speakers rated the English version of the ads as more emotional than Dutch native speakers ($t(7.63) = 2.33$, $p < .05$) but not as more emotional than Dutch native speakers' ratings of the Dutch ads ($p > .7$). Moreover, the other L2 speakers of English (Brazilian, Chinese, French, German, and Spanish) also rated the English version of the ads as less emotional than the English native speakers ($t(15.7) = 3.78$, $p < .01$). Finally, Dutch native speakers rated the English version of the ads as more emotional than the other L2 speakers of English ($t(14.3) = 2.59$, $p < .05$), suggesting that the choice of Dutch native speakers as target participants implied a generally conservative test of the hypotheses.

appraisal (emotional intensity vs. attitudes) within-subjects. Moreover, to assess the effect of country of origin more thoroughly, the additional factor of foreign country (U.K. vs. U.S.A.) was nested within the foreign country of origin condition. Participants were 92 Dutch students from the same student population of the previous experiments (for age, $M = 22.36$, $SD = 3.09$, 43% males). Six new print ads were created in two versions: with and without text (verbal information in the text condition was in English). To summarize, students read three ads with and three without text (except for the nonsensical brand name) and rated emotional intensity and attitudes for each of them. Half were told that the ads were from the Netherlands and the remaining that they were from a foreign country. In this study no effect involving the country of origin manipulation was significant (for main effect and interactions, $ps > .45$). A separate analysis of the factor nested within the foreign country of origin condition, moreover, showed no significant differences between the U.K. and the U.S.A. ($ps > .25$). The rejection of the country of origin explanation for the results of study 2 is not the product of low statistical power. In the no text condition Dutch ads ($M = 3.75$) were rated as directionally less emotional than foreign ads ($M = 4.04$). The results of study 1 corroborate this conclusion.

STUDY 3

The results of study 1 and 2 favor the theoretical accounts predicting an L1 emotional advantage: the linguistic experience and emotion identification account and the context of learning and emotional meaning account. Study 3 was designed to further assess these two theories. Understanding emotions is not the same as feeling emotions. The linguistic experience and emotion identification account focused on the former aspect of the emotional life of

individuals; whereas the context of learning and emotional meaning account focused on the latter. Study 3 tested these two accounts by manipulating, in addition to the language of the ads, the language of the rating scales.

According to the linguistic experience and emotion identification account, L2 ads are rated as less emotional due to consumer's more limited experience with decoding emotional expression in L2 compared to L1. This tendency to appraise emotions more easily when using L1 than L2 should have repercussions for how people rate the same ads depending on the language of the anchoring points of the scales. More specifically, if L1 emotional labels provide better descriptors of the emotional content of the ads than L2 labels this should be reflected in higher emotional ratings when using L1 rating scales. An emotional advantage of L1 should therefore be observed following a manipulation of the language of both ads and ratings scales.

The context of learning and emotional meaning account leads to the opposite prediction for the language of rating scales manipulation. According to this account, language shifts the relative intensity of the anchoring points of the rating scales because of the stronger emotional intensity of the L1 labels. If L1 emotional labels "mean more" than L2 labels then respondents should display a tendency to express more extreme judgments of emotional intensity when using L2 rating scales. In sum, the direction of the effect of language on emotional appraisal should be reversed across the two manipulations of language. When comparing the effect of language of the ads, this account predicts an advantage of L1; whereas when comparing the effect of language of the rating scales, it predicts an advantage of L2.

Study 3 replicated study 2 using a different practice trial. It is possible that in study 2 the selection of an ad in English for computer speakers as practice trial increased participants' focus on the prevalence of English in technological and technical jargon (cf. Lee 2006). Such an

increased focus could have resulted in lower appraisal of the affective qualities of the English stimuli, leading to an especially strong effect of language on emotional appraisal. The effect of the language manipulation on perceived informational content is consistent with this account (however, note the lack of support for the negative correlation hypothesis discussed earlier). To rule out this alternative explanation, study 3 therefore replicated study 2 using a different opening ad, one in Dutch and not for a technological product.

Method

Design and Participants. The design of this experiment was the same as the one used in study 2 with the additional between-subjects manipulation of the language of rating scales, leading to a 2 (Type of appraisal: emotional intensity vs. attitudes) x 2 (Language of ads: L1 vs. L2) x 2 (Language of rating scales: L1 vs. L2) mixed design. As in study 2, ad order and language sequence were counterbalanced between-subjects, leading to eight different versions of the questionnaire. Participants were 155 Dutch students who completed the experiment in return for a chocolate bar (for age, $M = 22.21$, $SD = 4.19$, 50% females).

Procedure. Participants were recruited at the campus of a large Dutch university and invited to the lab where they completed the study in individual cubicles. As in study 2, participants were given a booklet containing a number of ads and were asked to rate each of them on a series of nine-point semantic differentials. Instead of the computer speakers ad, the opening ad in this study was the candies ad from study 2 (in Dutch). Due to the additional manipulation of the language of rating scales, in order to obtain a perfect procedural match between the experimental cues used in the two conditions the constructs were measured with only one item (Bergkvist and Rossiter forthcoming). For each ad participants rated four of the

semantic differentials used in study 2. Positive anchors were “emotional” (emotional appraisal), “good” (attitudes towards the ad), “informative” (informational content), and “difficult” (level of difficulty).

The stimuli were six of the ads used in study 2. In addition to the candies ad (which became the practice trial), the cancer research ad was also dropped. This ad was the only one included in study 2 that did not contain any visual element (see Table 1).

The translation of the booklet to Dutch was performed with the same procedure used in study 2 to translate the ads. A similar procedure to that adopted in study 2 was also used to generate the ad order and language sequence counterbalancing factors. In sum, participants rated three ads in English and three in Dutch. Half of participants read the instruction and rating scales in English and the other half in Dutch. Four different versions of the booklet for each language of rating scales condition were distributed randomly across participants.

Results

With the only difference of the additional between-subjects manipulation of language of rating scales, the data were subjected to the same analysis carried out in study 2. The analysis highlights significant two-way interactions between type of appraisal and language of rating scales ($F(1, 151) = 7.8$, $p < .01$) and between type of appraisal and language of stimuli ($F(1, 151) = 10.80$, $p < .01$). See table 2 for means and standard deviations. Additional analyses were performed to assess the nature of these interactions.

An ANCOVA model was estimated across language of stimuli conditions to evaluate the differential effect of the language of rating scales manipulation on the two types of appraisal. This model shows a significant effect of the language of rating scales manipulation on emotional

intensity, $F(1, 151) = 10.22$, $p < .01$. Ads were rated as more emotional when rated using the L2 label “emotional” ($M = 4.79$) than the L1 label “emotioneel” ($M = 4.33$). No effect of the language of rating scales manipulation was instead observed on attitude ratings ($p > .65$).

Similarly, an ANCOVA model was estimated across language of rating scales conditions to estimate the differential effect of the language of stimuli manipulation on the two types of appraisal. As in study 2, participants rated the emotional intensity of the ads higher when exposed to L1 ads ($M = 4.73$) than L2 ads ($M = 4.38$, $F(1, 152) = 5.76$, $p < .05$). Unexpectedly, a marginally significant effect of the language of stimuli manipulation was observed for the attitude scores, $F(1, 152) = 3.6$, $p < .06$. L2 ads ($M = 5.29$) were evaluated more positively then L1 ads ($M = 5.09$).

The three-way interaction between the experimental treatments was nonsignificant ($p > .5$), as were also the main effects of the language manipulations (ps > .11) and those of the counterbalancing conditions (ps > .13). The main effect of type of appraisal was instead significant, $F(1, 151) = 48.29$, $p < .0001$. Attitude scores ($M = 5.19$) were in general higher than those of emotional intensity ($M = 4.59$). No effect of the language manipulations was observed on informational content (ps > .3) or perceived difficulty (ps > .45).

Discussion

Study 3 replicated the significant interaction between type of appraisal and language of stimuli observed in study 2. Participants rated the L1 version of the ads as more emotional than their L2 equivalents. This effect was accompanied by an unexpected marginally significant effect on attitude scores in the opposite direction. In addition to the interaction between language of stimuli and type of appraisal, that between language of rating scales and type of appraisal was

also significant. Participants reported more extreme ratings of emotional intensity when performing the task using L2 rating scales, with no differences across conditions for attitude scores. The results are all the more striking when one considers the perceptual similarity between the English and Dutch labels used to probe this effect: “emotional” and “emotioneel.” Overall, this finding provides support for the context of learning and emotional meaning account. The experiment failed instead to replicate the results for perceived informational content observed in study 2. It is possible that this is a consequence of the change of practice trial from study 2 to study 3.

STUDY 4

Study 3 showed that the emotional advantage of L1 is not simply a consequence of consumers’ greater expertise in decoding emotion-related information in L1 than L2 but that the emotional advantage of L1 lies instead in the stronger emotional connections of L1 words. At a more general level, the context of learning and emotional meaning account implies that individuals should hold more emotional associations with their native language than with their second language. No research has so far tested the overall degree of emotionality of the associations to L1 versus L2. To corroborate the evidence gathered so far for the context of learning and emotional meaning account, it would therefore be important to assess whether an emotional advantage exists for a language in general, independently of exposure to external stimuli. With this aim, an exploration of the emotional connection of native speakers to L1 and L2 was conducted by means of free association tasks.

Participants were 150 students from the same population as the previous experiments (for age, $M = 22.31$, $SD = 3.1$, 41% females). Participants were approached on campus and invited to complete a short booklet (in Dutch) where they were asked to think about the English and Dutch languages and to write down words that they associated to each language. A total of 495 individual responses were obtained (276 for L1 and 219 for L2) distributed across 88 different associations (44 for each language). Four consumer researchers (all Dutch native speakers) rated these associations for the degree of emotionality involved (one to seven from "not emotional at all" to "very emotional") and their responses were averaged to obtain an emotionality score for each association. The associations were then divided between a low and a high emotionality group, based on the median for the emotionality score (43 responses that scored around the median could not be unambiguously assigned to a group and were eliminated from the analysis). An analysis of the distribution of the answers in these two groups across the two languages shows significantly stronger emotionality of the words associated to L1, $\chi^2(1) = 14.91$, $p = .0001$. For L1, 96 responses were observed in the low emotionality group and 131 in the high emotionality one. For L2, these frequencies were 136 and 89 respectively. In sum, study 4 demonstrated that consumers hold more emotional associations with L1 than L2. These results offer additional support for the context of learning and emotional meaning account.

GENERAL DISCUSSION

Globalization is the defining social trend of the age and "one of the dominant forces in the psychological development of the people in the 21st century" (Arnett 2002, p. 781). The importance of this process demands that consumer researchers begin to address issues directly

related to globalization, such as bilingualism (Johar et al. 2006). This article provides insight into the consequences for emotional processes of the globalization of advertising language and of the increasing use of English in ads from countries that do not have English as their first language.

Four theories of the effect of language on the perceived emotionality of textual information were formulated; two predicting an advantage of L1 and two predicting an advantage of L2. The results of four experiments are consistent with the context of learning and emotional meaning account according to which a difference in the emotionality of the L1 and L2 learning contexts leads L1 words to acquire stronger emotional associations than L2 words (Harris et al. 2006). Across three studies L1 stimuli were rated as more emotional than L2 stimuli, ruling out the accounts based on the decreasing emotional sensitivity to habitual action and on the attentional consequences of stimulus unfamiliarity. The emotional advantage of L1 was assessed via both specific emotions (study 1 and 2) and global evaluations of emotional intensity (study 2 and 3). Moreover, in study 3 the effect of language was assessed in a series of interactions involving type of appraisal and manipulations of language. The data showed an L1 emotional advantage following a manipulation of the language of the target ads but an L2 advantage following a manipulation of the language of the rating scales, thus ruling out the linguistic experience and emotion identification account. A fourth study using free association tasks provided additional support for the context of learning and emotional meaning account by showing that consumers hold more emotional association to L1 than to L2.

Theoretical and Practical Implications

The article contributes to psycholinguistic literature on emotionality and language in a number of ways. No research program had previously assessed the effect of language on the

emotional appraisal of complex objects, not limited to single words, accompanied by visual cues, of moderate emotional intensity, and in a context where L2 is not the dominant language.

Furthermore, the results make a number of contributions specific to consumer research. This article is the first to focus on the consequences of language for the perceived emotionality of ads and, from a broader point of view, the first to adopt a psycholinguistic perspective on the emotional consequences of the process of globalization for consumers. Bilingualism is a growing area in consumer research (e.g., Luna and Peracchio 2001; 2005; Tavassoli and Lee 2003; Zhang and Schmitt 2001; 2004) and the article adds a new dimension to this body of literature.

The results also have implications for research on response styles in surveys (e.g., Baumgartner and Steenkamp 2001). A response style is a tendency to systematically respond to survey questions on some basis other than what the items were designed to measure (Baumgartner and Steenkamp 2001). Most researchers assume that all items are influenced equally by style factors (cf. Baumgartner and Steenkamp 2001). A recent article by De Jong et al. (forthcoming), however, challenged this notion. They focused on extreme response style, the tendency to select the most extreme response categories, and investigated the influence of a number of item characteristics, such as the length of the question, on the magnitude of the bias. De Jong et al. demonstrated the importance of general item characteristics but did not investigate whether items from certain content domains are more sensitive to response styles. This is an important issue because it relates to the nature of the construct to be measured and not merely to the implementation of the survey. The present experiments, and in particular the results for the manipulation of the language of rating scales in study 3, add to this body of literature by highlighting a content domain (emotional intensity) that is especially sensitive to extreme response style. The implications of this discussion are not only theoretical. The language effect

on emotional appraisal documented in this article could in many situations lead to inflated error terms. For example, marketing research data is often collected online by means of an Internet survey (often in English) that respondents, independently of their physical location and native tongue, are free to complete. More worryingly, the emotional advantage of L1 could under certain circumstances complicate the interpretation of research results. For example, in experimental research on cross-cultural differences, emotional stimuli (e.g., ads, scenarios, scales) are often administered to all participants using the same language.

In study 2 and 3 an L1 advantage was not detectable on attitudes towards the ads. The studies presented above therefore show that the emotional advantage of L1 does not necessarily translate into changes of global ad evaluations. On the one hand, this result could be taken to imply that the lower emotional intensity of L2 ads should not be necessarily considered a worry by advertisers. On the other hand, delivering emotional experiences can be a strategic goal in its own right, as part for example of attempts to build a certain brand personality. To the extent that generating emotional reactions is considered an important advertising objective, the studies presented above indicate that using a foreign language may reduce ad effectiveness. Moreover, although the article focused on ads, the implications of this discussion extend beyond advertising, for example to brand names, slogans, and product packaging.

Limitations and Future Research

It is possible that the emotional advantage of L1 has significant consequences for memory. Anooshian and Hertel (1994) found that degree of emotionality was positively associated to recall but only when words were presented in L1. No recall advantage of emotional words was observed when words were presented in L2. Aycicegi and Harris (2004) found instead a positive

relationship between emotionality and recall for both L1 and L2 words, with the effect of emotionality on recall stronger for L2 words. These contrasting findings call for future research on memory as a function of language emotionality.

In addition, study 3 found a marginally significant effect of language of the ads on attitude ratings, such that the same ads were liked more when presented in L2. Moreover, in study 2 the ads were rated as more informational when presented in L2. It is possible that these results were the consequence of positive connotations of the English language (e.g., Lee 2006). This claim, however, is speculative and available evidence is not all consistent with it. The results from study 2, for example, do not show a similar effect of language on attitudes (cf. Gerritsen et al. 2000). Research should explore the effect of the use of English in ads of countries where this is not the first language using a sociolinguistic perspective (Koslow et al. 1994).

The studies reported above used Dutch as L1 and English as L2, based on arguments related to validity and relevance. This position is consistent with the vast majority of studies in psychology that relies on comparisons between target languages to draw general conclusions about the cognitive representation of language. Nevertheless, the potential issue of cultural factors should not be ignored. The relative closeness of Northern European cultures and the variety of methods and stimuli used to probe the effect of language minimized this possibility in the current studies, but they did not eliminate it completely. Further research should therefore explore language effects in advertising by focusing on different target L1 languages.

REFERENCES

Amati-Mehler, Jaqueline, Simona Argentieri, and Jorge Canestri (1993), *The Babel of the Unconscious: Mother Tongue and Foreign Languages in the Psychoanalytic Dimension*. Madison, CT: International Universities Press.

Anooshian, Linda J. and Paula T. Hertel (1994), "Emotionality in Free Recall: Language Specificity in Bilingual Memory," *Cognition and Emotion*, 8 (6), 503-514.

Aycicegy, Ayse and Catherine L. Harris (2004), "Bilinguals' Recall and Recognition of Emotion Words," *Cognition and Emotion*, 18 (7), 977-987.

Arnett, Jeffrey J. (2002), "The Psychology of Globalization," *American Psychologist*, 57 (10), 774-783.

Berlyne, Daniel E. (1960), *Conflict, Arousal, and Curiosity*, New York: McGraw-Hill.

Baumgartner, Hans and Jan-Benedict E. M. Steenkamp (2001), "Response Styles in Marketing Research: A Cross-National Investigation," *Journal of Marketing Research*, 38 (May), 143-156.

Bergkvist, Lars and John R. Rossiter (forthcoming), "The Predictive Validity of Multiple-item vs. Single-item Measures of the Same Constructs," *Journal of Marketing Research*.

Bond, Michael H. and Tat-Ming Lai (1986), "Embarrassment and Code-Switching into a Second Language," *Journal of Social Psychology*, 126 (2), 179-186.

Cristal, David (1997), *English as a Global Language*. Cambridge, UK: Cambridge University Press.

De Jong, Martijn G., Jan-Benedict E. M. Steenkamp, Jean-Paul Fox, and Hans Baumgartner (forthcoming), "Using Item Response Theory to Measure Extreme Response Style in Marketing Research: A Global Investigation," *Journal of Marketing Research*.

Dewaele, Jean-Marc (2004), "The Emotional Force of Swearwords and Taboo Words in the Speech of Multilinguals," *Journal of Multilingual and Multicultural Development*, 25 (2-3), 204-222.

---------- and Aneta Pavlenko (2004), "Languages and Emotions: A Crosslinguistic Perspective (Introduction to Special Issue)," *Journal of Multilingual and Multicultural Development*, 25 (2-3), 93.

Domzal, Teresa J., Hunt, James M., Kernan, Jerome B. (1995) "Achtung! The Information Processing of Foreign Words in Advertising," *International Journal of Advertising*, 14 (2), 95-114.

Edell, Julie A. and Marian C. Burke (1987), "The Power of Feelings in Understanding Advertising Effects," *Journal of Consumer Research*, 14 (December), 421-433.

Eurobarometer (2001), *Europeans and Languages, Issue 54 (Special)*. Brussels: The Education and Culture Directorate-General.

Fabrigar, Leandre R., Tara K. MacDonald, and Duane T. Wegener (2005), "The Structure of Attitudes," in *The Handbook of Attitudes*, ed. Dolores Albarracín, Blair T. Johnson and Mark P. Zanna, Mahwah, NJ: Erlbaum, 79-124.

Finegan, Edward (1987), "English," in *The World's Major Languages*, ed. Bernard Comrie, Beckenham, UK: Croom Helm, 77-109.

Frijda, Nico H. (1988), "The Laws of Emotion," *American Psychologist*, 43 (5), 349-358.

Gerritsen, Marinel, Hubert Korzilius, Frank van Meurs, and Inge Gijsberg (2000), "English in Dutch Commercials: Not Understood and not Appreciated," *Journal of Advertising Research*, July/August, 17-31.

Greenwald, Anthony G. and Clark Leavitt (1984), "Audience Involvement in Advertising: Four Levels," *Journal of Consumer Research*, 11 (June), 581-592.

Harris, Catherine L. (2004), "Bilingual Speakers in the Lab: Psychophysiological Measures of Emotional Reactivity," *Journal of Multilingual and Multicultural Development*, 25 (2-3), 223-247.

----------, Ayse Aycicegi, and Jean Berko Gleason (2003), "Taboo Words and Reprimands Elicit Greater Autonomic Reactivity in a First Language than in a Second Language," *Applied Psycholinguistics*, 24, 561-579.

----------, Jean Berko Gleason, and Ayse Aycicegi (2006), "When is a First Language More Emotional? Psychophysiological Evidence from Bilingual Speakers," in *Bilingual Minds: Emotional Experience, Expression, and Representation*, ed. Aneta Pavlenko, Clevedon, UK: Multilingual Matters, 257-311.

Harris, Paul L. (2000), "Understanding Emotion," in *Handbook of Emotions*, ed. Michael Lewis and Jeanette M. Haviland-Jones, New York: Guilford, 281-292.

Javier, Rafael A. (1989), "Linguistic Considerations in the Treatment of Bilinguals," *Psychoanalytic Psychology*, 6 (1), 87-96.

Johar, Gita V., Durairaj Maheswaran, and Laura A. Peracchio (2006), "MAPping the Frontiers: Theoretical Advances in Consumer Research on Memory, Affect, and Persuasion," *Journal of Consumer Research*, 33 (June), 139-149.

Keller, Kevin L. (1998), *Strategic Brand Management*, Upper Saddle River, NJ: Prentice Hall.

Koslow, Scott, Prem N. Shamdasani, and Ellen E. Touchstone (1994), "Exploring Language Effects in Ethnic Advertising: A Sociolinguistic Perspective," *Journal of Consumer Research*, 20 (March), 575-585.

La Heij, Wido, Andre Hooglander, Robert Kerling, and Esther van der Velden (1996), "Nonverbal Context Effects in Forward and Backward Word Translation: Evidence for Concept Mediation," *Journal of Memory and Language*, 35, 648-665.

Lazarus, Richard S. (1991), "Progress on a Cognitive-Motivational-Relational Theory of Emotion," *American Psychologist*, 46 (8), 819-834.

Leclerc, France, Bernd H. Schmitt, and Laurette Dubé (1994), "Foreign Branding and Its Effects on Product Perception and Attitudes," *Journal of Marketing Research*, 31 (May), 263-270.

Lee, Jamie S. (2006), "Linguistic Constructions of Modernity: English Mixing in Korean Television Commercials," *Language in Society*, 35, 59-91.

Luna, David and Laura A. Peracchio (2001), "Moderators of Language Effects in Advertising to Bilinguals: A Psycholinguistic Approach," *Journal of Consumer Research*, 28 (September), 284-294.

---------- and ---------- (2005), "Advertising to Bilingual Consumers: The Impact of Code-Switching on Persuasion," *Journal of Consumer Research*, 31 (March), 760-765.

Pavlenko, Aneta (2005), *Emotions and Bilingualism*. Cambridge: Cambridge University Press.

----------, ed. (2006), *Bilingual Minds: Emotional Experience, Expression and Representation*, Clevedon, UK: Multilingual Matters.

Richins, Marsha L. (1997), "Measuring Emotions in the Consumption Experience," *Journal of Consumer Research*, 24 (September), 127-146.

Scherer, Klaus R., Rainer Banse, and Harald G. Walbott (2001), "Emotion Inferences from Vocal Expression Correlate across Languages and Cultures," *Journal of Cross-Cultural Psychology*, 32(1), 76-92.

Shiv, Baba and Fedorikhin, Alexander (1999), "Heart and Mind in Conflict: The Interplay of Affect and Cognition in Consumer Decision Making," *Journal of Consumer Research*, 26 (December), 278-292.

Sunderman, Gretchen and Judith F. Kroll (2006), "First Language Activation During Second Language Lexical Processing," *Studies in Second Language Acquisition*, 28, 387-422.

Tavassoli, Nader T. and Yih Hwai Lee (2003), "The Differential Interaction of Auditory and Visual Advertising Elements with Chinese and English," *Journal of Marketing Research*, 40 (November), 468-480.

Van Osselaer, Stijn M. J. (forthcoming), "Associative Learning and Consumer Decisions," in *Handbook of Consumer Psychology*, eds. Curtis P. Haugtvedt, Paul Herr, and Frank R. Kardes, Mahwah, NJ: Erlbaum.

Wilde, Oscar (1987), *De Egoistische Reus*. Hoorn, NL: Westfriesland.

---------- (1999), *Complete Works of Oscar Wilde*. London: Harper-Collins.

Wood, Wendy, Jeffrey M. Quinn, and Deborah A. Kashy (2002), "Habits in Everyday Life: Thought, Emotion, and Action," *Journal of Personality and Social Psychology*, 83 (6), 1281-1297.

Zhang, Shi and Bernd H. Schmitt (2001), "Creating Local Brands in Multilingual International Markets," *Journal of Marketing Research*, 38 (August), 313-325.

---------- and ---------- (2004), “Activating Sound and Meaning: The Role of Language Proficiency in Bilingual Consumer Environment,” *Journal of Consumer Research*, 31 (June), 220-228.

TABLE 1

DESCRIPTION OF STIMULI USED IN STUDY 2 AND 3

Study	Brand	Product/Cause	Textual information (English version)	Visual information
2	Alion	Candies	It's always the right moment for Alion candies!	Sketch of a happy young woman lying on a sofa eating candies
2, 3	Brader	Band-aids	Waterproof plasters in all shapes with antibiotic protection and effective adhesive strip	Sketch of band-aids of different sizes framed by smiling suns
2, 3	Elline	Vitamin supplement	All the vitamin C your body needs	Boy balancing an apple on his head (top), citrus fruits and pills on a table (middle)
2, 3	Fendall	Mountaineering equipment	Pure passion. Follow your heart and fulfill your dreams	Scenic mountain view
2	Irris	Cancer research	Hi, my name is Carla. When you read this I may be dead. I am 46 and I have discovered that I have cancer. Please, help cancer research (URL address follows)	White font on black background
2, 3	Midail	Toaster	Revolutionary heating system for consistent toasting … (top). … slice after slice (bottom)	Toaster with toasted bread slices on its side
2, 3	SMK	Depression helpline	You are not alone. Everybody feels lonely from time to time. But, for some, loneliness is more than a passing feeling. If you need someone to talk call us (phone number follows)	A tea pot with two empty tea cup on the side
2, 3	Zenta	Unisex perfume	Caution: may increase heart rate and decrease inhibitions	Couple hugging, perfume bottle on the side

TABLE 2

CELL MEANS (AND STANDARD DEVIATION) FOR STUDY 2 AND 3

	Language of ads		Language of rating scales	
Type of appraisal	L1	L2	L1	L2
Study 2:				
Emotional intensity	5.44	4.98		
	(0.85)	(0.75)		
Attitudes	5.28	5.16		
	(1.00)	(0.94)		
Study 3:				
Emotional intensity	4.73	4.38	4.33	4.79
	(1.29)	(1.32)	(0.96)	(0.86)
Attitudes	5.09	5.29	5.22	5.16
	(1.24)	(1.13)	(0.87)	(1.28)

Publications in the Report Series Research* in Management

ERIM Research Program: "Marketing"

2006

The Effect of Feedback and Learning on DSS Evaluations
Ujwal Kayande, Arnaud de Bruyn, Gary Lilien, Arvind Rangaswamy and Gerrit Van Bruggen
ERS-2006-001-MKT
http://hdl.handle.net/1765/7302

Interaction Between Shelf Layout and Marketing Effectiveness and Its Impact On Optimizing Shelf Arrangements
Erjen van Nierop, Dennis Fok and Philip Hans Franses
ERS-2006-013-MKT
http://hdl.handle.net/1765/7632

Institutional Forecasting: The Performance of Thin Virtual Stock Markets
Gerrit H. Van Bruggen, Martin Spann, Gary L. Lilien and Bernd Skiera
ERS-2006-028-MKT
http://hdl.handle.net/1765/7840

Irritation Due to Direct Mailings from Charities
Merel van Diepen, Bas Donkers and Philip Hans Franses
ERS-2006-029-MKT
http://hdl.handle.net/1765/7832

When Should Nintendo Launch its Wii? Insights From a Bivariate Successive Generation Model
Philip Hans Franses and Carlos Hernández-Mireles
ERS-2006-032-MKT
http://hdl.handle.net/1765/7867

How Feedback Can Improve Managerial Evaluations of Model-based Marketing Decision Support Systems
Ujwal Kayande, Arnaud de Bruyn, Gary Lilien, Arvind Rangaswamy and Gerrit van Bruggen
ERS-2006-039-MKT
http://hdl.handle.net/1765/7893

Moving in Social Circles – Social Circle Membership and Performance Implications
Willem Verbeke and Stefan Wuyts
ERS-2006-041-MKT
http://hdl.handle.net/1765/7899

Polysemy in Advertising
Stefano Puntoni, Jonathan E. Schroeder and Mark Ritson
ERS-2006-043-MKT
http://hdl.handle.net/1765/7898

Categorization by Groups
Rebecca W. Hamilton, Stefano Puntoni and Nader T. Tavassoli
ERS-2006-044-MKT
http://hdl.handle.net/1765/7900

Time-Series Models in Marketing
Marnik G. Dekimpe, Philip Hans Franses, Dominique M. Hansses and Prasad A. Naik
ERS-2006-049-MKT
http://hdl.handle.net/1765/7984

Dynamic and Competitive Effects of Direct Mailings
Merel van Diepen, Bas Donkers and Philip Hans Franses
ERS-2006-050-MKT
http://hdl.handle.net/1765/7948

Multidimensional Scaling with Regional Restrictions for Facet Theory: An Application to Levi's Political Protest Data
Patrick J.F. Groenen and Ivo A. van der Lans
ERS-2006-057-MKT
http://hdl.handle.net/1765/8045

The Quest for Citations: Drivers of Article Impact
Stefan Stremersch, Isabel Verniers and Peter C. Verhoef
ERS-2006-061-MKT
http://hdl.handle.net/1765/8127

"Emotional" versus "Emotioneel": Advertising Language and Emotional Appraisal
Stefano Puntoni
ERS-2006-066-MKT

---

* A complete overview of the ERIM Report Series Research in Management:
https://ep.eur.nl/handle/1765/1

ERIM Research Programs:
LIS Business Processes, Logistics and Information Systems
ORG Organizing for Performance
MKT Marketing
F&A Finance and Accounting
STR Strategy and Entrepreneurship